

AN ASIMOV SURPRISE! Page 7

AMAZING

MARCH

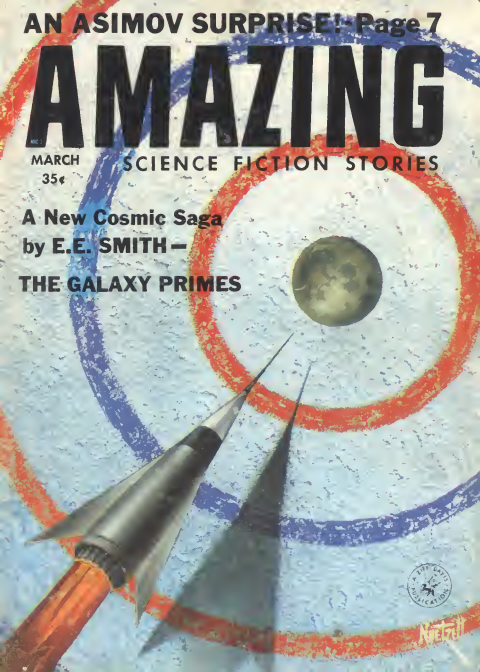
35¢

SCIENCE FICTION STORIES

A New Cosmic Saga

by E.E. SMITH—

THE GALAXY PRIMES



Nietz

IT'S MAGIC!

If you like a really good fantasy story about magic, be sure to pick up the March issue of FANTASTIC. You'll read about a befuddled hero, a beautiful girl, a fearsome demon, and a potion that spells **Trouble With Magic!**



Don't miss this
story in the March
issue of
FANTASTIC,

on sale February 19, only 35c



AMAZING SCIENCE FICTION STORIES, Vol. 33, No. 3, March 1959, is published monthly by Ziff-Davis Publishing Company, William B. Ziff, Chairman of the Board (1946-1953), at 434 South Wabash Ave., Chicago 5, Illinois. Second-class postage paid at Chicago, Ill. Subscription rates: U. S. and possessions and Canada \$3.50 for 12 issues; Pan American Union Countries \$4.00; all other foreign countries \$4.50.

AMAZING

SCIENCE FICTION STORIES

REG. U. S. PAT. OFF.

MARCH 1959

Volume 33 Number 3

NOVEL

THE GALAXY PRIMES (Part I)

By E. E. Smith..... 78

SHORT STORIES

AN ASIMOV SURPRISE!..... 7

MAROONED OFF VESTA

By Isaac Asimov..... 8

ANNIVERSARY

By Isaac Asimov..... 24

MEASURE FOR A LONER

By Jim Harman..... 38

THE JUPITER WEAPON

By Charles L. Fantenay..... 50

QUESTION OF COMFORT

By Les Collins..... 61

JUBILATION, U. S. A.

By G. L. Vandenburg..... 129

FEATURES

EDITORIAL..... 5

...OR SO YOU SAY..... 138

THE SPECTROSCOPE..... 141

"COMING NEXT MONTH"..... 23



Cover: ALBERT NUETZELL

ZIFF-DAVIS PUBLISHING COMPANY, One Park Avenue, New York 16, N. Y. William Ziff, President; W. Bradford Briggs, Executive Vice President; Michael Michaelson, Vice President and Circulation Director; H. B. Sarbin, Secretary; Howard Stoughton, Jr., Treasurer; Albert Gruen, Art Director.



Publisher

MICHAEL MICHAELSON

Editorial Director

NORMAN M. LOBSENZ

Editor

CELE GOLDSMITH

Art Editor

SID GREIFF



The greatest names in science fiction



RECENT FULL-LENGTH NOVELS WHICH HAVE APPEARED IN AMAZING STORIES

The Waters Under The Earth
by Charles Eric Maine

The Space Egg
by Russ Winterbotham

Gold In The Sky
by Alan E. Nourse

One Of Our Cities is Missing
by Irving Cox

Parasite
by Jack Vance

This Crowded Earth
by Robert Bloch

The Planet Savers
by Marion Zimmer Bradley

Robert Bloch • John Wyndham • Henry Slesar
• Eric Frank Russell • A. Bertram Chandler •
Rog Phillips • E. E. Smith • Charles Fontenay
• Marion Zimmer Bradley • O. H. Leslie •
Jack Sharkey • Isaac Asimov • Randall Garret
• Lloyd Biggle • Robert Silverberg • Robert F.
Young • Harlan Ellison • Gordon Dickson •
Cordwainer Smith • etc....

appear regularly in the pages of **AMAZING STORIES**

Month after month you get the finest science fiction by the greats of the field. Every issue contains a feature-length novel (usually prior to hard cover publication), several short works and a thrilling fact-feature. It's s-f reading at its best.

You can now subscribe to Amazing Stories at this money-saving rate ...

1 YEAR FOR ONLY \$3.50

This brings you a whole year of Amazing Stories for just about the price of the average s-f novel, or the price of just ten issues of Amazing if you were to buy them at the newsstand. You actually get the equivalent of two issues free...plus the convenience of having your copies delivered right to your home.

Just fill in the order form below, clip it out and mail today. That way, you'll be sure of the best in science fiction reading for a long time to come.

ZIFF-DAVIS PUBLISHING CO. • 434 South Wabash Ave. • Chicago 5, Ill.

☐ Please enter my subscription to Amazing Stories for 1 year at \$3.50.

☐ Sign me up for the special 2-year rate of only \$6.50

☐ Payment enclosed

☐ Please bill me

AM 3-9

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

E d i t o r i a l

WE ARE ALL particularly proud of this issue of *Amazing*, and I want to tell you why.

For the past few months we have all been working hard here not only to improve the magazine—for that is a continuing project—but to bring a sense of excitement to it, to get out of the rut.

And this is the issue that takes the first of what we hope will be many big steps forward. To begin with, we know you will all join us in welcoming to these pages E. E. Smith, whose universe-sweeping novel, "The Galaxy Primes," begins in this issue. It has been too long since a Smith epic carried our imaginations off to the far reaches of space. And this newest one does so with a vengeance—with enough adventure, beautiful women, daring heroes, otherworld creatures, and superscience to satisfy even the greediest space-fan.

For the second shot from our double-barreled gun, we give you Isaac Asimov's surprise celebration of the 20th anniversary of his first published story—published (you guessed it!) in *Amazing*. For all the background on this unique venture in science-fiction editing, I suggest you turn to Page 7 as soon as you finish this.

And, finally, we'd like to call your attention to a new cover artist, and to solicit your opinions of his work.

We cannot guarantee you Smith and Asimov in every issue from now on. But we can guarantee you that every issue will have some element of the excitement that we here feel in putting them together for you.—N.L.

THE LARGEST SCIENCE-FICTION AUDIENCE IN THE WORLD WILL SEE THIS ADVERTISEMENT!

FANTASY & SF BOOKS & MAGS lowest prices, list free.
Werewolf Bookshop, 7035L Shannon Road, Verona, Pa.

THIS AD, which appears in AMAZING'S classified section, will be seen this month by the largest science-fiction audience in the world. As the Verona, Pa., advertiser can tell you—it's smart to place your classified ad where it will be read by *real* science-fiction enthusiasts!

If you have something to buy, sell, trade—or if you would like to get in touch with s-f fans throughout the world—try AMAZING'S classified columns. It's sure to bring fast results. Yet it costs so little: just 25¢ a word, including name and address or box number. (Minimum message is 10 words.)

Simply fill in the handy form below—and mail it today!

_____ (1)	_____ (2)	_____ (3)
_____ (4)	_____ (5)	_____ (6)
_____ (7)	_____ (8)	_____ (9)
_____ (10—\$2.50)	_____ (11—\$2.75)	_____ (12—\$3.00)
_____ (13—\$3.25)	_____ (14—\$3.50)	_____ (15—\$3.75)
_____ (16—\$4.00)	_____ (17—\$4.25)	_____ (18—\$4.50)
_____ (19—\$4.75)	_____ (20—\$5.00)	_____ (21—\$5.25)

**CLIP COUPON, ENCLOSE PAYMENT AND MAIL TODAY TO:
AMAZING STORIES, One Park Avenue, New York 16, N. Y.**

Use separate sheet of paper for additional ads.

AN ASIMOV SURPRISE!

TWENTY years ago an eager stripling named Isaac Asimov entered the office of Ray Palmer, then Managing Editor of *Amazing*, and made his first sale of a science-fiction story.

In this issue we at *Amazing*—with unabashed sentiment, pleasure and pride—give you the 20th anniversary story that Isaac Asimov, no longer a stripling but one of our most brilliant writers, created to mark this personal milestone.

But this is more than a private celebration for Isaac Asimov and for *Amazing*. It is a chance for every science-fiction fan to live again the unforgettable early days of s-f; to see how far we have come; and to take part vicariously in the development of one of the top-notch writing skills in our field.

So, on the next page we present a reprint of Isaac Asimov's first story—"Marooned Off Vesta"—which appeared in the March, 1939, issue of *Amazing*. It is headed by a new drawing by Virgil Finlay which reproduces the original illustration. Immediately following it is Asimov's 1959 story, appropriately titled, "Anniversary."

And, for a bonus, we also give you two Letters to the Editor—one written by stripling Asimov in 1939; the other by veteran Asimov in 1959.

Brooklyn, N. Y.
March, 1939

Dear Editor,

By the time these words see print, I shall be an aged patriarch rapidly approaching the venerable age of 19. Of these 19, the last 10 have been spent mainly in, on and about science fiction. As a matter of fact my father introduced me to my first copy of *Amazing* sometime in 1929 and the first story I read was "*Barton's Island*." Since then I have been a steady reader, my favorite story of all time being "*Drums of Tapajos*."

I am of medium height, dark, and my mother thinks I'm handsome. The general consensus does not commit itself quite so far, but I do not complain. I am now serving the last year of my sentence at Columbia University and will graduate next June with flying colors. My favorite pastime is reading; my favorite sciences, mathematics and astronomy (though I am a major in chemistry at Columbia and am taking a pre-med course). As far as I know I have

(Continued on page 143)



Precariously, he clung to the space ship's hull. What would happen when his ray pierced the tank?



By ISAAC ASIMOV

ILLUSTRATOR FINLAY

There was air for only three days, but water to last a year. Warren Moore attempted an impossible plan —and won!

CHAPTER I

Wreck Of The Silver Queen

WILL you please stop walking up and down like that," said Warren Moore from the couch, "it won't do any of us any good. Think of our blessings; we're airtight, aren't we?"

Mark Brandon whirled and ground his teeth at him. "I'm

glad you feel happy about that," he spat out viciously. "Of course you don't know that our air-supply will last only three days." He resumed his interrupted stride with a defiant air.

Moore yawned and stretched, assumed a more comfortable

position, and replied, "Expend-ing all that energy will only use it up faster. Why don't you take a hint from Mike here. He's tak-ing it easy."

"Mike" was Michael Shea, late a member of the crew of the *Silver Queen*. His short, squat body was resting on the only chair in the room and his feet were on the only table. He looked up as his name was mentioned, his mouth widening in a twisted grin.

"You've got to expect things like this to happen sometimes," he said. "Bucking the asteroids is risky business. We should've taken the hop. It takes longer, but it's the only safe way. But no, the captain wanted to make the schedule; he *would* go through," Mike spat disgustedly, "and here we are."

"What's the 'hop'?" asked Brandon.

"Oh, I take it that friend Mike means that we should have avoided the asteroid belt by plotting a course outside the plane of the ecliptic," answered Moore. "That's it, isn't it, Mike?"

Mike hesitated and then replied cautiously, "Yeah—I guess that's it."

Moore smiled blandly and continued, "Well, I wouldn't blame Captain Crane too much. The repulsion screen must have failed five minutes before that chunk of granite barged into us. That's not his fault, though of course we ought to have steered

clear instead of relying on the screen." He shook his head meditatively, "The *Silver Queen* just went to pieces. It's really miraculously lucky that this part of the ship remained intact, and what's more, air-tight."

"You've got a funny idea of luck, Warren," said Brandon. "Always have for as long as I've known you. Here we are in a tenth part of a spaceship, comprising only three *whole* rooms, with air for three days, and no prospect of being alive after that. And you have the infernal gall to prate about luck."

"Compared to the others who died instantly when the asteroid struck, yes," was Moore's answer.

"You think so, eh? Well, let me tell you that instant death isn't so bad compared with what we're going to have to go through. Suffocation is a damned unpleasant way of dying."

"We may find a way out," Moore suggested hopefully.

"Why not face facts!" Brandon's face was flushed and his voice trembled. "We're done, I tell you! Through!"

Mike glanced from one to the other doubtfully and then coughed to attract their attention, "Well, gents, seeing that we're all in the same fix, I guess there is no use hogging things." He drew a small bottle out of his pocket that was filled with a greenish liquid. "Grade A *Jabra* this is. I ain't too proud to share and share alike."

Brandon exhibited the first

signs of pleasure for over a day. "Marian *Jabra* water. Why didn't you say so before?"

But as he reached for it, a firm hand clamped down upon his wrist. He looked up into the calm blue eyes of Warren Moore.

"Don't be a fool," said Moore, "there isn't enough to keep us drunk for three days. What do you want to do? Go on a tear now and then die cold sober? Let's save this for the last six hours when the air gets stuffy and breathing hurts—then we'll finish the bottle among us and never *know* when the end comes, or *care*."

Brandon's hand fell away reluctantly, "Damn it, Warren, you'd bleed ice if you were cut. How can you think straight at a time like this?" He motioned to Mike and the bottle was once more stowed away. Brandon walked to the porthole and gazed out.

Moore approached and placed a kindly arm over the shoulders of the younger man. "Why take it so hard, man?" he asked, "you can't last at this rate. Inside of twenty-four hours you'll be a madman if you keep this up."

There was no answer. Brandon stared bitterly at the globe that filled almost the entire porthole, so Moore continued, "Watching Vesta won't do you any good, either."

Mike Shea lumbered up to the porthole, "We'd be safe if we were only down there on Vesta.

There's people there. How far away are we?"

"Not more than three or four hundred miles judging from its apparent size, answered Moore. "You must remember that it is only two hundred miles in diameter."

"Three hundred miles from salvation," murmured Brandon, "and we might as well be a million. If there were only a way to get ourselves out of the orbit this rotten fragment adopted. You know, manage to give ourselves a push so as to start falling. There'd be no danger of crashing if we did, because that midget hasn't got enough gravity to crush a creampuff."

"It has enough to keep us in the orbit," retorted Brandon. "It must have picked us up while we were lying unconscious after the crash. Wish it had come closer; we might have been able to land on it."

"Funny place, Vesta," observed Mike Shea. "I was down there two-three times. What a dump! It's all covered with some stuff like snow only it ain't snow. I forget what they call it."

"Frozen carbon dioxide?" prompted Moore.

"Yeah, dry ice, that carbon stuff, that's it. They say that's what makes Vesta so shiny."

"Of course! That would give it a high albedo."

Mike cocked a suspicious eye at Moore and decided to let it pass. "It's hard to see anything down there on account of the snow, but if you look close," he

pointed, "you can see a sort of gray smudge. I think that's Bennett's dome. That's where they keep the observatory. And there is Calorn's dome up there. That's a fuel station, that is. There's plenty more, too, only I don't see them."

He hesitated and then turned to Moore, "Listen, boss, I've been thinking. Wouldn't they be looking for us as soon as they hear about the crash? And wouldn't we be easy to find from Vesta seeing we're so close?"

Moore shook his head, "No, Mike, they won't be looking for us. No one's going to find out about the crash until the *Silver Queen* fails to turn up on schedule. You see, when the asteroid hit, we didn't have time to send out an SOS." He sighed. "And they won't find us down there at Vesta, either. We're so small that even at our distance they couldn't see us unless they knew what they were looking for, and exactly where to look.

"Hmm," Mike's forehead was corrugated in deep thought, "then we got to get to Vesta before three days are up."

"You've got the gist of the matter, Mike. Now, if we only knew how to go about it, eh?"

Brandon suddenly exploded, "Will you two stop this infernal chitter-chatter and do something? For God's sake, do something."

Moore shrugged his shoulders and without answer, returned to the couch. He lounged at ease, apparently carefree, but there

was the tiniest crease between his eyes which bespoke concentration.

There was no doubt about it; they *were* in a bad spot. He reviewed the events of the preceding day for perhaps the twentieth time.

After the asteroid had struck, tearing the ship apart, he'd gone out like a light; for how long he didn't know, his own watch being broken and no other time-piece available. When he came to, he found himself, along with Mark Brandon, who shared his room, and Mike Shea, a member of the crew, sole occupants of all that was left of the *Silver Queen*.

This remnant was now careening in an orbit about Vesta. At present, things were fairly comfortable. There was a food supply that would last a week. Likewise there was a regional gravitator under the room that kept them at normal weight and would continue to do so for an indefinite time, certainly for longer than the air would last. The lighting system was less satisfactory but had held on so far.

There was no doubt, however, where the joker in the pack lay. Three days air! Not that there weren't other disheartening features. There was no heating system (though it would take a long time for the ship to radiate enough heat into the vacuum of space to render them too uncomfortable). Far more important

was the fact that their part of the ship had neither a means of communication nor a propulsive mechanism. Moore sighed; one fuel jet in working order would fix everything, for one blast in the right direction would send them safely to Vesta.

The crease between his eyes deepened. What was to be done? They had but one spacesuit among them, one heat-ray, and one detonator. That was the sum total of space appliances after a thorough search of the accessible parts of the ship. A pretty hopeless mess, that.

Moore shrugged his shoulders, rose and drew himself a glass of water. He swallowed it mechanically, still deep in thought, when an idea struck him. He glanced curiously at the empty cup in his hand.

"Say, Mike," he said, "what kind of water supply have we? Funny that I never thought of that before."

Mike's eyes opened to their fullest extent in an expression of ludicrous surprise. "Didn't you know, boss?"

"Know *what*?" asked Moore impatiently.

"We've got all the water there was," he waved his hand in an all-inclusive gesture. He paused, but as Moore's expression showed nothing but total mystification, he elaborated, "don't you see? We've got the main tank, the place where all the water for the whole ship was stored." He pointed to one of the walls.

"Do you mean to say that there's a tank full of water adjoining us?"

Mike nodded vigorously, "Yep! Cubic vat a hundred feet each way. And she's three-quarters full."

Moore was astonished, "750,000 cubic feet of water." Then suddenly, "Why hasn't it run out through the broken pipes?"

"It only has one main outlet, which runs down the corridor just outside this room. I was fixing that main when the asteroid hit and had to shut it off. After I came to I opened the pipe leading to our faucet, but that's the only outlet open now."

"Oh." Moore had a curious feeling way down deep inside. An idea had half-formed in his brain, but for the life of him he could not drag it into the light of day. He knew only that there was something in what he had just heard that had some important meaning but he just could not place his finger on it.

Brandon, meanwhile, had been listening to Shea in silence, and now he emitted a short, humorless laugh, "Fate seems to be having its fill of fun with us, I see. First, it puts us within arm's reach of a place of safety and then sees to it that we have no way of getting there.

"Then she provides us with a week's food, three days air, and a *year's supply of water*. A year's supply, do you hear me? Enough water to drink and to gargle and to wash and to take

baths in and—and to do anything else we want. Water—damn the water!”

“Oh, take a less serious view, Mark,” said Moore in an attempt to break the younger man’s melancholy. “Pretend we’re a satellite of Vesta (which we are). We have our own period of revolution and of rotation. We have an equator and an axis. Our ‘north pole’ is located somewhere toward the top of the porthole, pointing toward Vesta and our ‘south’ sticks out away from Vesta through the water tank somewhere. Well, as a satellite, we have an atmosphere, and now, you see, we have a newly discovered ocean.

“And seriously, we’re not so badly off. For the three days our atmosphere will last, we can eat double rations and drink ourselves soggy. Hell, we have water enough to throw away—”

The idea which had been half-formed before suddenly sprang to maturity and was nailed. The careless gesture with which he had accompanied the last remark was frozen in midair. His mouth closed with a snap and his head came up with a jerk.

But Brandon, immersed in his own thoughts, noticed nothing of Moore’s strange actions. “Why don’t you complete the analogy to a satellite,” he sneered, “or do you, as a Professional Optimist, ignore any and all disagreeable facts? If I were you, I’d continue this way.” Here he imitated Moore’s voice, “The satellite is at present habitable

and inhabited but due to the approaching depletion of its atmosphere in three days, is expected to become a dead world.”

“Well, why don’t you answer? Why do you persist in making a joke out of this? Can’t you see—*what’s the matter?*”

The last was a surprised exclamation and certainly Moore’s actions did merit surprise. He had arisen suddenly and after giving himself a smart rap on the forehead, remained stiff and silent, staring into the far distance with gradually narrowing eyelids. Brandon and Mike Shea watched him in speechless astonishment.

Suddenly Moore burst out, “Ha! I’ve got it. Why didn’t I think of it before?” His exclamations degenerated into the unintelligible.

Mike drew out the *Jabra* bottle with a significant look, but Moore waved it away impatiently. Whereupon Brandon, without any warning, lashed out with his right, catching the surprised Moore flush on the jaw and toppling him.

Moore groaned and rubbed his chin. Somewhat indignant, he asked, “What was the reason for that?”

“Stand up and I’ll do it again,” shouted Brandon, “I can’t stand it any more. I’m sick and tired of being preached at, and having to listen to your Pollyanna talk. *You’re* the one that’s going daffy.”

“Daffy, nothing! Just a little

overexcited, that's all. Listen, for God's sake. I think I know a way—"

Brandon glared at him balefully, "Oh, you do, do you? Raise our hopes with some silly scheme and then find it doesn't work. I won't take it, do you hear? I'll find a real use for the water; drown you—and save some of the air besides."

Moore lost his temper, "Listen, Mark, you're out of this; I'm going through alone. I don't need your help and I don't want it. If you're that sure of dying and that afraid, why not have the agony over. We've got one heat-ray and one detonator, both reliable weapons. Take your choice and kill yourself. Shea and I won't interfere." Brandon's lip curled in a last weak gesture of defiance and then suddenly he capitulated, completely and abjectly, "All right, Warren, I'm with you. I—I guess I didn't quite know what I was doing. I don't feel well, Warren. I—I—"

"Aw, that's all right, boy." Moore was genuinely sorry for him. Take it easy. I know how you feel. It's got me, too. But you mustn't give in to it. Fight it, or you'll go stark, raving mad. Now you just try and get some sleep and leave everything to me. Things will turn out right yet."

Brandon, pressing a hand to an aching forehead, stumbled to the couch and tumbled down. Silent sobs shook his frame while

Moore and Shea remained in embarrassed silence nearby.

CHAPTER 2

A Tough Job

AT LAST, Moore nudged Mike. "Come on," he whispered, "let's get busy. We're going places. Airlock 5 is at the end of the corridor, isn't it? Shea nodded and Moore continued, "Is it airtight?"

"Well," said Shea after some thought, "the inner door is, of course, but I don't know anything about the outer one. For all I know it may be a sieve. You see, when I tested the wall for airtightness, I didn't dare open the inner door, because if there was anything wrong with the outer one—blooey!" The accompanying gesture was very expressive.

"Then it's up to us to find out about that outer door right now. I've got to get outside some way and we'll just have to take chances. Where's the spacesuit?"

He grabbed the lone suit from its place in the cupboard, threw it over his shoulder and led the way into the long corridor that ran down the side of the room. He passed closed doors behind whose air-tight barriers were what once had been passenger quarters but which were now merely cavities, open to space. At the end of the corridor was the tight-fitting door of Airlock 5.

Moore stopped and surveyed

it appraisingly, "Looks all right," he observed, "but of course you can't tell what's outside. God, I hope it'll work." He frowned, "Of course we could use the entire corridor as an air-lock, with the door to our room as the inner door and this as the outer door but that would mean the loss of half our air-supply. We can't afford that—yet."

He turned to Shea, "All right, now. The indicator shows that the lock was last used for entrance, so it should be full of air. Open the door the tiniest crack, and if there's a hissing noise, shut it quick."

"Here goes," and the lever moved one notch. The mechanism had been severely shaken up during the shock of the crash and its former noiseless workings had given way to a harsh, rasping sound; but it was still in commission. A thin black line appeared on the left hand side of the lock, marking where the door had slid a fraction of an inch on the runners.

There was no hiss! Moore's look of anxiety faded somewhat. He took a small pasteboard from his pocket and held it against the crack. If air were leaking that card should have held there, pushed by the escaping gas. It fell to the floor.

Mike Shea stuck a forefinger in his mouth and then put it against the crack. "Thank the Lord," he breathed, "not the sign of a draft."

"Good, good. Open it wider. Go ahead."

Another notch and the crack opened further. And still no draft. Slowly, ever so slowly, notch by notch, it creaked its way wider and wider. The two men held their breaths, afraid that while not actually punctured, the outer door might have been so weakened as to give way any moment. But it held! Moore was jubilant as he wormed into the spacesuit.

"Things are going fine so far, Mike," he said. "You sit down right here and wait for me. I don't know how long I'll take but I'll be back. Where's the heat-ray? Have you got it?"

Shea held out the ray and asked, "But what are you going to do? I'd sort of like to know."

Moore paused as he was about to buckle on the helmet. "Did you hear me say inside that we had water enough to throw away? Well, I've been thinking it over and that's not such a bad idea. I'm going to throw it away." With no other explanation, he stepped into the lock, leaving behind him a very puzzled Mike Shea.

It was with a pounding heart that Moore waited for the outer door to open. His plan was an extraordinarily simple one—but it might not be easy to carry out.

There was a sound of creaking gears and scraping ratchets. Air sighed away to nothingness. The door before him slid open a few inches and stuck. Moore's heart sank as for a moment he thought

it would not open at all, but after a few preliminary jerks and rattles the barrier slid the rest of the way.

He clicked on the magnetic grapple and, very cautiously, put a foot out into space. Clumsily, he groped his way out to the side of the ship. He had never been outside a ship in open space before and a vast dread overtook him as he clung there, fly-like, to his precarious perch. For a moment dizziness overcame him.

He closed his eyes and for five minutes hung there, clutching the smooth sides of what had once been the *Silver Queen*. The magnetic grapple held him firm and when he opened his eyes once more he found his self-confidence in a measure returned.

He gazed about him. For the first time since the crash he saw the stars, instead of the vision of bloated Vesta which their porthole afforded. Eagerly, he searched the skies for the little green speck that was Earth. It had often amused him that Earth should always be the first object sought for space-travelers when star-gazing but the humor of the situation did not strike him now. However, his search was in vain. From where he lay Earth was invisible. It, as well as the Sun, must be hidden behind Vesta.

Still, there was much else that he could not help but note. Jupiter was off to the left, a brilliant globe the size of a small pea to the naked eye. Moore observed

two of its attendant satellites. Saturn was visible, too, as a brilliant star of some negative magnitude, rivaling Venus as seen from Earth.

Moore had expected that a goodly number of asteroids would be visible, marooned as they were in the asteroid belt, but space seemed surprisingly empty. Once he thought he could see a hurtling body pass within a few miles but so fast had the impression come and gone that he could not swear that it was not fancy.

And then, of course, there was Vesta. Almost directly below him it loomed like a balloon filling a quarter of the sky. It floated steadily, snowy white, and Moore gazed at it with earnest longing. A good hard kick against the side of the ship, he thought, might start him falling toward Vesta. He *might* land safely and get help for the others. But the chance was too great that he would merely take on a new orbit about Vesta. No, it would have to be better than that.

This reminded him that he had no time to lose. He scanned the side of the ship, looking for the water tank but all he could see was a jungle of jutting walls, jagged, crumbling, and pointed. He hesitated. Evidently, the only thing to do was to make for the lighted porthole to their room and proceed to the tank from there.

Carefully he dragged himself

along the wall of the ship. Not five yards from the lock, the smoothness stopped abruptly. There was a yawning cavity which Moore recognized as having once been the room adjoining the corridor at the far end. He shuddered. Suppose he were to come across a bloated dead body in one of those rooms. He had known most of the passengers, many of them personally. But he overcame his squeamishness and forced himself to continue his precarious journey toward its goal.

And here he encountered his first practical difficulty. The room itself was made of non-ferrous material in many parts. The magnetic grapple was intended for use only on outer hulls and was useless throughout much of the ship's interior. Moore had forgotten this when suddenly he found himself floating down an incline, his grapple out of use. He gasped and clutched at a nearby projection. Slowly, he pulled himself back to safety.

He lay for a moment, almost breathless. Theoretically, he should be weightless out here in space (Vesta's influence being negligible), but the regional gravitator under his room was working. Without the balance of the other gravitators, it tended to place him under variable and sudden-shifting stresses as he kept changing his position. For his magnetic grapple to let go suddenly might mean being

jerked away from the ship altogether. And then what?

Evidently, this was going to be even more difficult than he had thought.

After that, he inched forward in a crawl, testing each spot to see if the grapple would hold. Sometimes he had to make long, circuitous journeys to gain a few feet's headway and at other times he was forced to scramble and slip across small patches of non-ferrous material. And always there was that tiring pull of the gravitator, continually changing directions as he progressed, setting horizontal floors and vertical walls at queer and almost haphazard angles.

Carefully, he investigated all objects that he came across. But it was a barren search. Loose articles, chairs, tables had been jerked away at the first shock probably and now were independent bodies of the solar system. He did manage, however, to pick up a small field-glass and fountain pen. These he placed in his pocket. They were valueless under present conditions, but somehow they seemed to make more real this macabre trip across the sides of a dead ship.

For fifteen minutes, twenty, half an hour, he labored slowly toward where he thought the porthole should be. Sweat poured down into his eyes and rendered his hair a matted mass. His muscles were beginning to ache under the unaccustomed strain. His mind, already strain-

ed by the ordeal of the previous day, was beginning to waver, to play him tricks.

The crawl began to seem eternal, something that had always existed and would exist forever. The object of the journey, that for which he was striving seemed unimportant; he only knew that it was necessary to move. The time, one hour back, when he had been with Brandon and Shea, seemed hazy and lost in the far past. That more normal time, two days age, wholly forgotten.

Only the jagged walls before him; only the vital necessity of getting at some uncertain destination existed in his spinning brain. Grasping, straining, pulling. Feeling for the iron alloy. Up and into gaping holes that were rooms and then out again. Feel and pull;—feel and pull. And—a light.

Moore stopped; had he not been glued to the wall he would have fallen. Somehow that light seemed to clear things. It was the porthole; not the many dark, staring ones he had passed, but alive and alight. Behind it was Brandon. A deep breath and he felt better, his mind cleared.

And now his way lay plain before him. Toward that spark of life he crept. Nearer, and nearer, and nearer until he could touch it. He was there!

His eyes drank in the familiar room. God knows that it hadn't any happy associations in his mind, but it was something real,

something almost natural. Brandon slept on the couch. His face was worn and lined but a smile passed over it now and then.

Moore raised his fist to knock. He felt the urgent desire to talk with someone, if only by sign language; yet at the last instant, he refrained. Perhaps the kid was dreaming of home. He was young and sensitive and had suffered much. Let him sleep! Time enough to wake him when—and if—his idea had been carried through.

He located the wall within the room behind which lay the water tank and then tried to spot it from the outside. Now it was not difficult; its rear wall stood out prominently. Moore marvelled, for it seemed a very miracle that it had escaped puncture. Perhaps the Fates had not been so ironic after all.

Passage to it was easy though it was on the other side of the fragment. What was once a corridor led almost directly to it. Once when the *Silver Queen* had been whole, that corridor had been level and horizontal, but now, under the unbalanced pull of the regional gravitator, it seemed more of a steep incline than anything else. And yet it made the path simple. Of uniform beryl-steel, Moore found no trouble holding on as he wormed up the twenty-odd feet to the water supply.

And now the crisis—the last stage—had been reached. He felt that he ought to rest first but his excitement grew rapidly

in intensity; it was either now or bust. He pulled himself out to the bottom-center of the tank. There, resting on the small ledge formed by the floor of the corridor that had once extended on that side of the tank, he began operations.

"It's a pity that the main pipe is pointing in the wrong direction," he muttered. "It would have saved me a lot of trouble had it been right. As it is—" He sighed and bent to his work. The heat-ray was adjusted to maximum concentration and the invisible emanations focused at a spot perhaps a foot above the floor of the tank.

Gradually the effect of the excitatory beam upon the molecules of the wall became noticeable. A spot the size of a dime began shining faintly at the point of focus of the ray-gun. It wavered uncertainly, now dimming, now brightening as Moore strove to steady his tired arm. He propped it on the ledge and achieved better results as the tiny circle of radiation brightened.

Slowly the color ascended the spectrum. The dark, angry red that had first appeared lightened to a cherry color. As the heat continued pouring in, the brightness seemed to ripple out in widening areas, like a target made of successively deepening tints of red. The wall for a distance of some feet from the focal point was becoming uncomfortably hot even though it

did not glow and Moore found it necessary to refrain from touching it with the metal of his suit.

Moore cursed steadily, for the ledge itself was also growing hot. It seemed that only imprecations could soothe him. And as the melting wall began to radiate heat in its own right, the chief object of his maledictions were the space-suit manufacturers. Why didn't they build a suit that could keep heat *out* as well as keep it *in*?

But what Brandon called Professional Optimism crept up. With the salt tang of perspiration in his mouth, he kept consoling himself, "It could be worse, I suppose. At least, the two inches of wall here don't present too much of a barrier. Suppose the tank had been built flush against the outer hull. Whew! Imagine trying to melt through a foot of this." He gritted his teeth and kept on.

The spot of brightness was now flickering into the orange-yellow and Moore knew that the melting point of the beryl-steel alloy would soon be reached. He found himself forced to watch the spot only at widely-spaced intervals and then only for fleeting moments.

Evidently it would have to be done quickly, if it were to be done at all. The heat-ray had not been fully loaded in the first place, and, pouring out energy at maximum as it had been doing for almost ten minutes now, must be approaching exhaustion.

Yet the wall was just barely passing the plastic stage. In a fever of impatience, Moore jammed the muzzle of the gun directly at the center of the spot, drawing it back speedily.

A deep depression formed in the soft metal, but a puncture had not been formed. However, Moore was satisfied. He was almost there, now. Had there been air between himself and the wall, he would undoubtedly have heard the gurgling and the hissing of the steaming water within. The pressure was building up. How long would the weakened wall endure?

Then, so suddenly that Moore did not realize it for a few moments, he was through. A tiny fissure formed at the bottom of that little pit made by the ray-gun and in less time than it takes to imagine, the churning water within had its way.

The soft, liquid metal at that spot puffed out, sticking out raggedly around a pea-sized hole. And from that hole there came a hissing and a roaring. A cloud of steam emerged and enveloped Moore.

Through the mist he could see the steam condense almost immediately to ice droplets and saw these icy pellets shrink rapidly into nothingness.

For fifteen minutes, he watched the steam shoot out.

Then he became aware of a gentle pressure pushing him away from the ship. A savage joy welled up within him as he realized that this was the effect

of acceleration on the ship's part. His own inertia was holding him back.

That meant his work had been finished—and successfully. That stream of water was substituting for the rocket blast.

He started back.

If the horrors and dangers of the journey to the tank had been great, that back was greater. He was infinitely more tired, his aching eyes were all but blind, and added to the crazy pull of the Gravitator was the force induced by the varying acceleration of the ship. But whatever his labors to return, they did not bother him. In later time, he never even remembered the heartbreaking trip.

How he managed to negotiate the distance in safety he did not know. Most of the time he was lost in a haze of happiness, scarcely realizing the actualities of the situation. His mind was filled with one thought only—to get back quickly, to tell the happy news of their escape.

Suddenly he found himself before the airlock. He hardly grasped the fact that it *was* the airlock; he almost did not understand why he pressed the signal button. Some instinct told him it was the thing to do.

Mike Shea was waiting. There was a creak and a rumble and the outer door started opening, caught and stopped at the same place as before but once again it managed to slide the rest of the way. It closed again behind

him. Then the inner door opened and Moore stumbled into Shea's arms.

As in a dream he felt himself half pulled, half carried down the corridor to the room. His suit was ripped off and a hot, burning liquid stung his throat. Moore gagged, swallowed and felt better. Shea pocketed the *Jabra* bottle once more.

The blurred, shifting images of Brandon and Shea before him steadied and became solid. Moore wiped the perspiration from his face with a trembling hand and essayed a weak smile.

"Wait," protested Brandon, "don't say anything. You look half dead. Rest, will you!"

But Moore shook his head. In a hoarse, cracked voice he narrated as well as he could the events of the past two hours. The tale was incoherent, scarcely intelligible but marvelously impressive. The two listeners scarcely breathed during the recital.

"You mean," stammered Brandon, "that the water spout is pushing us toward Vesta; like a rocket exhaust."

"Exactly—same thing as—rocket exhaust," panted Moore, "action and reaction. Is located—on side opposite Vesta—hence pushing us toward Vesta.

Shea was dancing before the porthole. "He's right, Brandon, me boy. You can make out Bennett's dome as clear as day. We are getting there, we're getting there."

"We're approaching in spiral path on account of original orbit," Moore felt himself recovering. "We'll land in five or six hours probably. The water will last for quite a long while and the pressure is still great, since the water issues as steam."

"Steam—at the low temperature of space?" Brandon was surprised.

"Steam—at the low pressure of space!" corrected Moore. "The boiling point of water falls with the pressure. It is very low indeed in a vacuum. Even ice has a vapor pressure sufficient to sublime."

He smiled. "As a matter of fact, it freezes and boils at the same time. I watched it." A short pause, then "Well, how do you feel now, Brandon? Much better, eh?"

Brandon reddened and his face fell. He groped vainly for words for a few moments. Finally he said in a half-whisper, "You know, I must have acted like a damn fool and a coward at first. I—I guess I don't deserve all this after going to pieces and letting the burden of our escape rest on your shoulders.

"I wish you'd beat me up, or something, for punching you before. It'd make me feel better. I mean it." And he really did seem to mean it.

Moore gave him an affectionate push. "Forget it, you young jackass. You'll never know how near I came to breaking down myself." He raised his voice in

order to drown out any further apologies on Brandon's part, "Hey, Mike, stop staring out of that porthole and bring over that *Jabra* bottle."

Mike obeyed with alacrity, bringing with him three shaving mugs to be used as make-

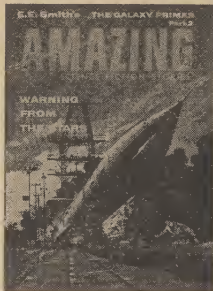
shift cups. Moore filled each precisely to the brim. He was going to be drunk with a vengeance.

"Gentlemen," he said solemnly, "a toast." The three raised the mugs in unison, "Gentlemen, I give you the year's supply of good old H₂O *we used to have*."

THE END

COMING NEXT MONTH

Along with the second installment of **E. E. Smith's** *The Galaxy Primes*, the April **AMAZING** brings you top stories by **Charles Fontenay**, **Cordwainer Smith**, and a brilliant new writer, **Keith Laumer**.



Fontenay spins a yarn of sheer adventure on Venus in *Wind*; **Smith** tells the almost mystical story of a ship so big it couldn't be believed—*Golden the Ship Was*—*Oh! Oh! Oh!*; and **Laumer's** gripping short novel, *Grey-lorn*, is one of the tautest, most suspenseful, most gripping stories of action in space we've read in a long time.

The jam-packed April **AMAZING** will bring you at least three other major stories, plus all our regular departments.

On sale at your newsstand March 10. 35¢.

Tell your dealer to reserve a copy for you now.

ANNIVERSARY

By ISAAC ASIMOV

*Twenty years later they were
still marooned—this time
in oblivion!*

THE annual ritual was all set. It was the turn of Moore's house this year, of course, and Mrs. Moore and the children had resignedly gone to her mother's for the evening.

Warren Moore surveyed the room with a faint smile. Only Mark Brandon's enthusiasm kept it going at the first, but he himself had come to like this mild remembrance. It came with age, he supposed; twenty additional years of it. He had grown paunchy, thin-haired, soft-jowled, and—worst of all—sentimental.

So all the windows were polarized into complete darkness and the drapes were drawn. Only occasional stipples of wall were illuminated, thus celebrating the poor lighting and the terrible isolation of that day of wreck-age long ago.

There were space-ship rations in sticks and tubes on the table and, of course, in the center an unopened bottle of sparkling green Jabra water, the potent brew that only the chemical activity of Martian fungi could supply.

Moore looked at his watch. Brandon would be here soon; he was never late for this occasion. The only thing that disturbed him was the memory of Brandon's voice on the tube: "Warren, I have a surprise for you this time. Wait and see. Wait and see."

Brandon, it always seemed to Moore, aged little. The younger man had kept his slimness, and the intensity with which he greeted all in life, to the verge of his fortieth birthday. He retained the ability to be in high excitement over the good and in

deep despair over the bad. His hair was going gray, but except for that, when Brandon walked up and down, talking rapidly at the top of his voice about anything at all, Moore didn't even have to close his eyes to see the panicked youngster on the wreck of the *Silver Queen*.

The door-signal sounded and Moore kicked the release without turning round. "Come, Mark."

It was a strange voice that answered, though; softly, tentatively, "Mr. Moore?"

Moore turned quickly. Brandon was there, to be sure, but only in the background, grinning with excitement. Someone else was standing before him; short, squat, quite bald, nut-brown and with the feel of space about him.

Moore said wonderingly, "Mike Shea—*Mike Shea*, by all Space."

They pounded hands together, laughing.

Brandon said, "He got in touch with me through the office. He remembered I was with Atomic Products—"

"It's been *years*," said Moore. "Let's see, you were on Earth twelve years ago—"

"He's never been here on an anniversary," said Brandon. "How about that? He's retiring now. Getting out of space to a place he's buying in Arizona. He came to say, hello, before he left; stopped off at the city just for that, and I was sure he came

for the anniversary. 'What anniversary?' says the old jerk."

Shea nodded, grinning, "He said you made a kind of celebration out of it every year."

"You bet," said Brandon, enthusiastically, "and this will be the first one with all three of us here, the first *real* anniversary. It's twenty years, Mike; twenty years since Warren scrambled over what was left of the wreck and brought us down to Vesta."

Shea looked about. "Space-ration, eh? That's old-home-week to me. And Jabra. Oh, sure, I remember . . . Twenty years. I never give it a thought and now, all of a sudden, it's yesterday. Remember when we got back to Earth finally?"

"Do I!" said Brandon. "The parades. The speeches. Warren was the only real hero of the occasion and we kept saying so, and they kept paying no attention. Remember?"

"Oh, well," said Moore. "We were the first three men ever to survive a spaceship crash. We were unusual and anything unusual is worth a celebration. These things are irrational."

"Hey," said Shea, "any of you remember the songs they wrote. That marching one? 'You can sing of routes through Space and the weary maddened pace of the—'"

Brandon joined in with his clear tenor and even Moore added his voice to the chorus so that the last line was loud enough to shake the drapes. "On the *wreck* of the *Silver Que-e-en*," they

roared out and ended laughing wildly.

Brandon said, "Let's open the Jabra for the first little sip. This one bottle has to last all of us all night."

Moore said, "Mark insists on complete authenticity. I'm surprised he doesn't expect me to climb out the window and human-fly my way around the building."

"Well, now, that's an idea," said Brandon.

"Remember the last toast we made?" Shea held his empty glass before him and intoned. 'Gentlemen, I give you the year's supply of good old H₂O we used to have.' Three drunken bums when we landed. —Well, we were kids. I was thirty and I thought I was old. And now," his voice was suddenly wistful, "they've retired me."

"Drink!" said Brandon. "Today you're thirty again, and we remember the day on the *Silver Queen* even if no one else does. Dirty, fickle public."

Moore laughed. "What do you expect? A national holiday every year with space-ration and Jabra the ritual food and drink."

"Listen, we're still the only men ever to survive a space-ship crash and now look at us. We're in oblivion."

"It's pretty good oblivion. We had a good time to begin with and the publicity gave us a healthy boost up the ladder. We are doing well, Mark. And so would Mike Shea be if he hadn't wanted to return to space."

Shea grinned and shrugged his shoulder. "That's where I like to be. I'm not sorry, either. What with the insurance compensation I got, I have a nice piece of cash now to retire on."

Brandon said reminiscently, "The wreck set back Trans-space Insurance a real packet. Just the same, there's still something missing. You say '*Silver Queen*' to anyone these days, and he can only think of Quentin, if he can think of anyone."

"Who?" said Shea.

"Quentin. Dr. Horace Quentin. He was one of the non-survivors on the ship. You say to anyone, What about the three men who survived? and they'll just stare at you. 'Huh,' they'll say."

Moore said, calmly, "Come, Mark, face it. Dr. Quentin was one of the world's great scientists and we three are just three of the world's nothings."

"We survived. We're still the only men on record to survive."

"So? Look, John Hester was on the ship, and he was an important scientist, too; not in Quentin's league, but important. As a matter of fact, I was next to him at the last dinner before the rock hit us. Well, just because Quentin died in the same wreck, Hester's death was drowned out. No one ever remembers Hester died on the *Silver Queen*. They only remember Quentin. We may be forgotten, too, but at least we're alive."

"I tell you what," said Bran-

don, after a period of silence during which Moore's rationale had obviously failed to take. "We're marooned again. Twenty years ago today, we were marooned off Vesta. Today, we're marooned in oblivion. Now here are the three of us back together again at last, and what happened before can happen again. Twenty years ago, Warren pulled us down to Vesta. Now let's solve this new problem."

"Wipe out the oblivion, you mean?" said Moore. "Make ourselves famous?"

"Sure. Why not? Do you know of any better way of celebrating a twentieth anniversary?"

"No, but I'd be interested to know where you expect to start. I don't think people remember the *Silver Queen* at all, except for Quentin, so you'll have to think of some way of bringing the wreck back to mind. That's just to begin with."

Shea stirred uneasily and a thoughtful expression crossed his blunt countenance. "Some people remember the *Silver Queen*. The insurance company does, and you know that's a funny thing, now that you bring up the matter. I was on Vesta about ten-eleven years ago, and I asked if the piece of the wreck we brought down was still there and they said sure, who would cart it away? So I thought I'd take a look at it and shot over by reaction motor strapped to my back. With Vestan gravity, you know, a reaction motor is all

you need. —Anyway, I didn't get to see it except from a distance. It was circled off by force-field."

Brandon's eyebrows went sky-high. "Our *Silver Queen*? for what reason?"

"I went back and asked how come they didn't tell me and they said they didn't know I was going there. They said it belonged to the insurance company."

Moore nodded, "Surely. They took over when they paid off. I signed a release, giving up my salvage rights when I accepted the compensation check. You did too, I'm sure."

Brandon said, "But why the force-field? Why all the privacy?"

"I don't know."

"The wreck isn't worth anything even as scrap metal. It would cost too much to transport it."

Shea said, "That's right. Funny thing, though; they were bringing pieces back from space. There was a pile of it there. I could see it and it looked like just junk, twisted pieces of frame, you know. I asked about it and they said ships were always landing and unloading more scrap, and the insurance company had a standard price for any piece of the *Silver Queen* brought back, so ships in the neighborhood of Vesta were always looking. Then, on my last voyage in, I went to see the *Silver Queen* again and that pile was a lot bigger.

"You mean they're still looking?" Brandon's eyes glittered.

"I don't know. Maybe they've stopped, but the pile was bigger than it was ten-eleven years ago so they were still looking then."

Brandon leaned back in his chair and crossed his legs. "Well, now, that's very queer. A hard-headed insurance company is spending all kinds of money, sweeping space near Vesta trying to find pieces of a twenty-year-old wreck."

"Maybe they're trying to prove sabotage," said Moore.

"After twenty years? They won't get their money back even if they do. It's a dead issue."

"They may have quit looking years ago."

Brandon stood up with decision. "Let's ask. There's something funny here and I'm just Jabrified enough and anniversaried enough to want to find out."

"Sure," said Shea, "but ask who?"

"Ask Multivac," said Brandon.

Shea's eyes opened wide. "Multivac! Say, Mr. Moore, do you have a Multivac outlet here?"

"Yes."

"I've never seen one, and I've always wanted to."

"It's nothing to look at, Mike. It just looks like a typewriter. Don't confuse a Multivac outlet with Multivac itself. I don't know anyone who's seen Multivac."

Moore smiled at the thought.

He doubted if ever in his life he would meet any of the handful of technicians that spent most of their working days in a hidden spot in the bowels of Earth tending a mile-long super-computer that was the repository of all the facts known to man; that guided man's economy; directed his scientific research; helped make his political decisions;—and had millions of circuits left over to answer individual questions that did not violate the ethics of privacy.

Brandon said as they moved up the power-ramp to the second floor, "I've been thinking of installing a Multivac, Jr. outlet for the kids. Homework and things, you know. And yet I don't want to make it just a fancy and expensive crutch for them. How do you work it, Warren?"

Moore said, tersely, "They show me the questions first. If I don't pass them, Multivac does not see them."

The Multivac outlet was indeed a simple typewriter arrangement and little more.

Moore set up the co-ordinates that opened his portion of the planet-wide network of circuits and said, "Now listen. For the record, I'm against this and I'm only going along because it's the anniversary and because I'm just jackass enough to be curious. Now how ought I to phrase the question?"

Brandon said, "Just ask: Are pieces of the wreck of the *Silver Queen* still being searched for in

the neighborhood of Vesta by Trans-space Insurance? It only requires a simple yes or no."

Moore shrugged and tapped it out, while Shea watched with awe.

The spaceman said, "How does it answer? Does it talk?"

Moore laughed gently, "Oh, no. I don't spend *that* kind of money. This model just prints the answer on a slip of tape that comes out that slot."

A short strip of tape did come out as he spoke. Moore removed it and after a glance, said, "Well, Multivac says yes."

"Hah!" cried Brandon. "Told you. Now ask why?"

"Now that's silly. A question like that would be obviously against privacy. You'll just get a yellow state-your-reason."

"Ask and find out. They have not made the search for the pieces secret. Maybe they're not making the reason secret."

Moore shrugged. He tapped out: Why is Trans-space Insurance conducting its *Silver Queen* search-project to which reference was made in the previous question?

A yellow slip clicked out almost at once: *State Your Reason For Requiring The Information Requested.*

"All right," said Brandon, unabashed. "You tell it we're the three survivors and have a right to know. Go ahead. Tell it."

Moore tapped that out in unemotional phrasing and another yellow slip was pushed out at

them: *Your Reason Is Insufficient. No Answer Can Be Given.*

Brandon said, "I don't see they have a right to keep that secret."

"That's up to Multivac," said Moore. "It judges the reasons given it and if it decides the ethics of privacy is against answering, that's it. The government itself couldn't break those ethics without a court order, and the courts don't go against Multivac once in ten years. So what are you going to do?"

Brandon jumped to his feet and began the rapid walk up and down the room that was so characteristic of him. "All right, then let's figure it out for ourselves. It's something important to justify all their trouble. We're agreed they're not trying to find evidence of sabotage, not after twenty years. But Trans-space must be looking for *something*; something so valuable that it's worth looking for all this time. Now what could be that valuable?"

"Mark, you're a dreamer," said Moore.

Brandon obviously didn't hear him. "It can't be jewels or money or securities. There just couldn't be enough to pay them back for what the search has already cost them; not if the *Silver Queen* were pure gold. What would be more valuable?"

"You can't judge value, Mark," said Moore. "A letter might be worth a hundredth of a cent as waste-paper and yet make a difference of a hundred

million dollars to a corporation, depending on what's in the letter."

Brandon nodded his head vigorously. "Right. Documents. Valuable papers. Now who would be most likely to have papers worth billions in his possession on that trip?"

"How could anyone possibly say?"

"How about Dr. Horace Quentin? How about that, Warren? He's the one people remember because he was so important. What about the papers he might have had with him; details of a new discovery, maybe. —Damn it, if I had only seen him on that trip. He might have told me something, just in casual conversation, you know. Did *you* ever see him, Warren?"

"Not that I recall. Not to talk to. So casual conversation with me is out, too. Of course, I might have passed him at some time without knowing it."

"No, you wouldn't have," said Shea, suddenly thoughtful. "I think I remember something. There was one passenger who never left his cabin. The steward was talking about it. He wouldn't even come out for meals."

"And that was Quentin?" said Brandon, stopping his pacing and staring at the spaceman eagerly.

"It might have been, Mr. Brandon. It might have been him. I don't know that anyone *said* it was. I don't remember. But it must have been a big

shot, because on a spaceship you don't fool around bringing meals to a man's cabin unless he is a big shot."

"And Quentin was *the* big shot on the trip," said Brandon, with satisfaction. "So he had something in his cabin. Something very important. Something he was concealing."

"He might just have been space-sick," said Moore, "except that—" He frowned and fell silent.

"Go ahead," said Brandon, urgently. "You remember something, too?"

"Maybe. I told you I was sitting next to Dr. Hester at the last dinner. He was saying something about hoping to meet Dr. Quentin on the trip and not having any luck."

"Sure," cried Brandon, "because Quentin wouldn't come out of his cabin."

"He didn't *say* that. We got to talking about Quentin, though. Now what was it he said?" Moore put his hands to his temples as though trying to squeeze out the memory of twenty years ago by main force. "I can't give you the exact words, of course, but it was something about Quentin being very theatrical or a slave of drama or something like that, and they were heading out to some scientific conference on Ganymede and Quentin wouldn't even announce the title of his paper."

"It all fits." Brandon resumed

his rapid pacing. "He had a new, great discovery, which he was keeping absolutely secret, because he was going to spring it on the Ganymede conference and get maximum drama out of it. He wouldn't come out of his cabin because he probably thought Hester would pump him—and Hester would, I'll bet. And then the ship hit the rock and Quentin was killed. Trans-space Insurance investigated, got rumors of this new discovery and figured that if they gained control of it, they could make back their losses and plenty more. So they took ownership of the ship and have been hunting for Quentin's papers among the pieces ever since."

Moore smiled, in absolute affection for the other man. "Mark, that's a beautiful theory. The whole evening is worth it, just watching you make something out of nothing."

"Oh, yeah. Something out of nothing? Let's ask Multivac again. I'll pay the bill for it this month."

"It's all right. Be my guest. If you don't mind, though, I'm going to bring up the bottle of Jabra. I want one more little shot to catch up with you."

"Me, too," said Shea.

Brandon took his seat at the typewriter. His fingers trembled with eagerness as he tapped out: What was the nature of Dr. Horace Quentin's final investigations?"

Moore had returned with the

bottle and glasses, when the answer came back; on white paper this time. The answer was long and the print was fine, consisting for the most part of references to scientific papers in journals twenty years old.

Moore went over it. "I'm no physicist, but it looks to me as though he were interested in optics."

Brandon shook his head impatiently. "But all that is published. We want something he had not published yet."

"We'll never find out anything about that."

"The insurance company did."

"That's just your theory."

Brandon was kneading his chin with an unsteady hand. "Let me ask Multivac one more question."

He sat down again and tapped out: "Give me the name and tube number of the surviving colleagues of Dr. Horace Quentin from among those associated with him at the University on whose faculty he served."

"How do you know he was on a University faculty?" asked Moore.

"If not, Multivac will tell us."

A slip popped out. It contained only one name.

Moore said, "Are you planning to call the man?"

"I sure am," said Brandon. —Otis Fitzimmons, with a Detroit tube-number. Warren, may I—"

"Be my guest, Mark. It's still part of the game."

Brandon set up the combina-

tion on Moore's tube keyboard. A woman's voice answered. Brandon asked for Dr. Fitzimmons and there was a short wait.

Then a thin voice said, "Hello." It sounded old.

Brandon said, "Dr. Fitzimmons, I'm representing Trans-space Insurance in the matter of the late Dr. Horace Quentin—"

("For heaven's sake, Mark," whispered Moore, but Brandon held up a sharply restraining hand.)

There was a pause so long that a tube break-down began to seem possible and then the old voice said, "After all these years? Again?"

(Brandon snapped his fingers in an irrepressible gesture of triumph.)

But he said smoothly, almost glibly, "We're still trying to find out, doctor, if you have remembered further details about what Dr. Quentin might have had with him on that last trip that would pertain to his last unpublished discovery."

"Well—" There was an impatient clicking of the tongue. "I've told you, I don't know. I don't want to be bothered with this again. I don't know that there was *anything*. The man hinted, but he was always hinting about some gadget or other."

"What gadget, sir?"

"I tell you I don't know. He used a name once and I told you about that. I don't think it's significant."

"We don't have the name in our records, sir."

"Well, you should have. Uh, what was that name? An optikon, that's it."

"With a K?"

"C or k. I don't know or care. Now, please, I do not wish to be disturbed again about this. Good-bye." He was still mumbling querulously, when the line went dead.

Brandon was pleased.

Moore said, "Mark, that was the stupidest thing you could have done. Claiming a fraudulent identity on the tube is illegal. If he wants to make trouble for you—"

"Why should he? He's forgotten about it already. But don't you see, Warren? Trans-space has been asking him about this. He kept saying he'd explained all this before."

"All right. But you'd assumed that much. What else do you know?"

"We also know," said Brandon, "that Quentin's gadget was called an optikon."

"Fitzimmons didn't sound certain about that. And even so, since we already know he was specializing in optics toward the end, a name like 'optikon' does not push us any further forward."

"And Trans-space Insurance is looking either for the optikon or for papers concerning it. Maybe Quentin kept the details in his hat and just had a model of the instrument. After all,

Shea said they were picking up metal objects. Right?"

"There was a bunch of metal junk in the pile," agreed Shea.

"They'd leave that in space if it were papers they were after. So that's what we want, an instrument that might be called an optikon."

"Even if all your theories were correct, Mark, and we're looking for an optikon, the search is absolutely hopeless now," said Moore, flatly. "I doubt that more than ten percent of the debris would remain in orbit about Vesta. Vesta's escape velocity is practically nothing. It was just a lucky thrust in a lucky direction and at a lucky velocity that put our section of the wreck in orbit. The rest is gone, scattered all over the Solar system in any conceivable orbit about the Sun."

"They've been picking up pieces," said Brandon.

"Yes, the ten percent that managed to make a Vestan orbit out of it. That's all."

Brandon wasn't giving up. He said thoughtfully, "Suppose it *were* there and they hadn't found it. Could someone have beat them to it?"

Mike Shea laughed. "We were right there, but we sure didn't walk off with anything but our skins, and glad to do that much. Who else?"

"That's right," agreed Moore, "and if anyone else picked it up, why are they keeping it a secret?"

"Maybe they don't know what it is."

"Then how do we go about—" Moore broke off and turned to Shea, "What did you say?"

Shea looked blank. "Who me?"

"Just now, about us being there." Moore's eyes narrowed. He shook his head as though to clear it, then whispered, "Great Galaxy!"

"What is it?" asked Brandon, tensely. "What's the matter, Warren?"

"I'm not sure. You're driving me mad with your theories; so mad, I'm beginning to take them seriously, I think. You know, we *did* take some things out of the wreck with us. I mean besides our clothes and what personal belongings we still had. Or at least I did."

"What?"

"It was when I was making my way across the outside of the wreckage—Space, I seem to be there now, I see it so clearly—I picked up some items and put them in the pocket of my space-suit. I don't know why; I wasn't myself, really. I did it without thinking. And then, well, I held on to them. Souvenirs, I suppose. I brought them back to Earth."

"Where are they?"

"I don't know. We haven't stayed in one place, you know."

"You didn't throw them out, did you?"

"No, but things do get lost when you move."

"If you didn't throw them

out, they must be somewhere in this house."

"If they didn't get lost. I swear I don't recall seeing them in fifteen years."

"What were they?"

Warren Moore said, "One was a fountain-pen, as I recall; a real antique, the kind that used an ink-spray cartridge. What gets me, though, is that the other was a small field-glass, not more than about six inches long. You see what I mean? A field-glass?"

"An optikon," shouted Brandon. "Sure!"

"It's just a coincidence," said Moore, trying to remain level-headed. "Just a curious coincidence."

But Brandon wasn't having it. "A coincidence, nuts! Trans-space couldn't find the optikon on the wreck and they couldn't find it in space because you had it all along."

"You're crazy."

"Come on, we've got to find the thing now."

Moore blew out his breath. "Well, I'll look, if that's what you want, but I doubt that I'll find it. Okay, let's start with the storage level. That's the logical place."

Shea chuckled. "The logical place is usually the worst place to look." But they all headed for the power-ramp once more and the additional flight upward.

The storage level had a musty, unused odor to it. Moore turned on the precipitron. "I don't

think we've precipitated the dust in two years. That shows you how often I'm up here. Now, let's see; if it's anywhere at all, it would be in with the bachelor collection; I mean the junk I've been hanging on to since bachelor days. We can start here."

Moore started leafing through the contents of plastic collapsibles while Brandon kept peering anxiously over his shoulder.

Moore said, "What do you know? My college year-book. I was a sonist in those days; a real bug on it. In fact, I managed to get a voice recording with the picture of every senior in this book." He tapped its cover fondly. "You could swear there was nothing there but the usual trimensional photos, but each one has an imprisoned—"

He grew aware of Brandon's frown and said, "Okay, I'll keep looking."

He gave up on the collapsibles and opened a trunk of heavy, old-fashioned woodite. He separated the contents of the various compartments.

Brandon said, "Hey, is that it?"

He pointed to a small cylinder that rolled out on the floor with a small clunk.

Moore said, "I don't— Yes! That's the pen. There it is. And here's the field-glass. Neither one works, of course. They're both broken. At least I suppose the pen's broken. Something's loose and rattles in it. Hear? I wouldn't have the slightest idea as to how to fill it so I can check

as to whether it really works. They haven't even made ink-spray cartridges in years."

Brandon held it under the light. "It has initials on it."

"Oh? I don't remember noticing any."

"It's pretty worn down. It looks like J.K.Q."

"Q?"

"Right, and that's an unusual letter with which to start a last name. This pen might have belonged to Quentin; an heirloom he kept for luck or sentiment. It might have belonged to a great-grandfather in the days when they used pens like this; a great-grandfather called Jason Knight Quentin or Judah Kent Quentin or something like that. We can check the names of Quentin's ancestors through Multivac."

Moore nodded, "I think maybe we should. See, you've got me as crazy as you are."

"And if this is so, it proves you picked it up in Quentin's room; so you picked up the field-glass there, too."

"Now hold it. I don't remember that I picked them both up in the same place. I don't remember the scrounging over the outside of the wreck that well."

Brandon turned the small field-glass over and over under the light. "No initials here."

"Did you expect any?"

"I don't see anything in fact, except this narrow joining mark here." He ran his thumbnail into the fine groove that circled

the glass near its thicker end. He tried to twist it unsuccessfully. "One piece." He put it to his eye. "This thing doesn't work."

"I told you it was broken. No lenses."

Shea broke in. "You've got to expect a little damage when a spaceship hits a good-sized meteor and goes to pieces."

"So even if this were it," said Moore, pessimistic again, "if this were the optikon, it would not do us any good."

He took the field-glass from Brandon and felt along the empty rims. "You can't even tell where the lenses belonged. There's no groove I can feel into which they might have been seated. It's as if there never—*Hey!*" He exploded the syllable violently.

"Hey what?" said Brandon.

"The name! The name of the thing!"

"Optikon, you mean?"

"Optikon, I don't mean! Fitzimmons, on the tube, called it an optikon and we thought he said 'an—optikon.'"

"Well, he did," said Brandon.

"Sure," said Shea. "I heard him."

"You just thought you heard him. He said, 'anoptikon.'—Don't you get it? Not 'an optikon,' two words, 'anoptikon,' one word."

"Oh," said Brandon, blankly. "And what's the difference."

"A hell of a difference. 'An optikon' would mean an instrument with lenses, but 'anopti-

kon,' one word, has the Greek prefix 'an-' which means 'no.' Words of Greek derivation use it for 'no.' Anarchy means 'no government,' anemia means 'no blood,' anonymous means 'no name' and anoptikon means—"

"No lenses," cried Brandon.

"Right! Quentin must have been working on an optical device without lenses and this may be it and it may not be broken."

Shea said, "But you don't see anything when you look through it."

"It must be set to neutral," said Moore. "There must be some way of adjusting it." Like Brandon, he placed it in both hands and tried to twist it about that circumscribing groove. He placed pressure on it, grunting.

"Don't break it," said Brandon.

"It's giving. Either it's supposed to be stiff or else its corroded shut." He stopped, looked at the instrument impatiently and put it to his eye again. He whirled, unpolarized a window and looked out at the lights of the city.

"I'll be dumped in Space," he breathed.

Brandon said, "What? What?"

Moore handed the instrument to Brandon wordlessly. Brandon put it to his eyes and cried out sharply. "It's a telescope."

Shea said at once, "Let me see."

They spent nearly an hour with it, converting it into a telescope with turns in one direc-

tion, a microscope with turns in the other.

"How does it work?" Brandon kept asking.

"I don't know," Moore kept saying. In the end, he said, "I'm sure it involves concentrated force-fields. We are turning against considerable field resistance. With larger instruments, power-adjustment will be required."

"It's a pretty cute trick," said Shea.

"It's more than that," said Moore. "I'll bet it represents a completely new turn in theoretical physics. It focuses light without lenses, and it can be adjusted to gather light over a wider and wider area without any change in focal length. I'll bet we could duplicate the five-hundred-inch Ceres telescope in one direction and an electron microscope in the other. What's more I don't see any chromatic aberration, so it must bend light of all wave-lengths equally. Maybe it bends radio waves and gamma rays also. Maybe it distorts gravity, if gravity is some kind of radiation. Maybe—"

"Worth money?" asked Shea, breaking in dryly.

"All kinds if someone can figure out how it works."

"Then we don't go to Trans-space Insurance with this. We go to a lawyer first. Did we sign these things away with our salvage rights or didn't we? You had them already in your possession before signing the paper. For that matter, is the pa-

per any good if we didn't know what we were signing away? Maybe it might be considered fraud."

"As a matter of fact," said Moore, "with something like this, I don't know if any private company ought to own it. We ought to check with some Government agency. If there's money in it—"

But Brandon was pounding both fists on his knees. "To hell with the money, Warren. I mean I'll take any money that comes my way but that's not the important thing. We're going to be famous, man, famous! Imagine the story. A fabulous treasure lost in space. A giant corporation combing space for twenty years to find it and all the time we, the forgotten ones, have it in our possession. Then, on the twentieth anniversary of the original loss, we find it again. If this thing works; if anoptics becomes a great new scientific technique, they'll *never* forget us."

Moore grinned, then started

laughing. "That's right. You did it, Mark. You did just what you set out to do. You've rescued us from being marooned in oblivion."

"We all did it," said Brandon. "Mike Shea started us off with the necessary basic information. I worked out the theory, and you had the instrument."

"Okay. It's late, and the wife will be back soon, so let's get the ball rolling right away. Multivac will tell us which agency would be appropriate and who—"

"No, no," said Brandon. "Ritual first. The closing toast of the anniversary, please, and with the appropriate change. Won't you oblige, Warren?" He passed over the still half-full bottle of Jabra water.

Carefully, Moore filled each small glass precisely to the brim. "Gentlemen," he said solemnly, "a toast." The three raised the glasses in unison. "Gentlemen, I give you the *Silver Queen* souvenirs, *we used to have.*"

THE END

CARE FOOD CRUSADE

\$1.00 sends a 22-lb. Food Crusade package
to the world's hungry through
CARE, New York 16.

*You can measure everything these days— heat,
light, gravity, reflexes, force-fields, star-drives.
And now I know there even is a*

MEASURE FOR A LONER

By JIM HARMON

SO, GENERAL, I came in to tell you I've found the loneliest man in the world for the Space Force.

How am I supposed to rate his loneliness for you? In Megasorrows or Kilofears? I suspect I know quite a library on the subject, but you know more about stripes and bars. Don't try to stop me this time, General.

Now that you mention it, I'm not drunk. I had to have something to back me up so I stopped off at the dispensary and stole a needle.

I want you to get off my back with that kind of talk. I've got enough there—it bends me over like I had bad kidneys. It isn't any of King Kong's little brothers. They over rate the stuff. It isn't the way you've been riding me either. Never mind what I'm carrying. Whatever it is—and

believe me, it *is*—I have to get rid of it.

Let me tell it, for God's sake.

Then for Security's sake? I thought you would let me tell it, General.

I've been coming in here and giving you pieces of it for months but now I want to let you be drenched in the whole thing. You're going to take it all.

There were the two of them, the two lonely men, and I found them for you.

You remember the way I found them for you.

The intercom on my blond desk made an electronic noise at me and the words I had been arranging in my mind for the morning letters splattered into alphabet soup like a printer dropping a prepared slug of type.

I made the proper motion to still the sound.

"Yes," I grunted.

My secretary cleared her throat on my time.

"Dr. Thorn," she said, "there's a Mr. Madison here to see you. He lays claim to be from the Star Project."

He could come in and file his claim, I told the girl.

I rummaged in the wastebasket and uncrumpled the morning's facsimile newspaper. It was full of material about the Star Project.

We were building Man's first interstellar spaceship.

A surprising number of people considered it important. Flipping from the rear to page one, Wild Bill Star in the comics who had been blasting all the way to forty-first sub-space universe for decades was harking back to the good old days of Man's first star flight (which he had made himself through the magic of time travel), the editor was calling the man to make the jaunt the Lindbergh of Space, and the staff photographer displayed a still of a Space Force pilot in pressure suit up front with his face blotted out by an air-brushed interrogation mark.

Who was going to be the Lindbergh of Space?

We had used up the Columbus of Space, the Magellan of Space, the Van Ruck of Space. Now it was time for the Lone Eagle, one man who would wait out the light years to Alpha Centauri.

I remembered the first Lindbergh.

I rode a bus fifty miles to see him at an Air Force Day celebration when I was a dewy-eared kid. It's funny how kids still worship heroes who did everything before they were even born. Uncle Max had told me about standing outside the hospital with a bunch of boys his own age the evening Babe Ruth died of cancer. Lindbergh seemed like an old man to me when I finally saw him, but still active. Nobody had forgotten him. When his speech was over I cheered him with the rest just as if I knew what he had been talking about.

But I probably knew more about what he meant then as a boy than I did feeling the reality of the newspaper in my hands. Grown-up, I could only smile at myself for wanting to go to the stars myself.

Madison rapped on my office door and breezed in efficiently.

I've always thought Madison was a rather irritating man. Likable but irritating. He's too good looking in an unassuming masculine way to dress so neatly—it makes him look like a mannequin. That polite way of his of using small words slowly and distinctly proves that he loves his fellow man—even if his fellow always does have less brains or authority than Madison himself. That belief would be forgivable in him if it wasn't so often true.

Madison folded himself into the canary yellow client's chair

at my direction, and took a leather-bound pocket secretary from inside his almost-too-snug jacket.

"Dr. Thorn," he said expansively, "we need you to help us locate an atavism."

I flicked professional smile No. Three at him lightly.

"I'm a historical psychologist," I told him. "That sounds in my line. Which of your ancestors are you interested in having me analyze?"

"I used the word 'atavism' to mean a reversion to the primitive."

I made a pencil mark on my desk pad. I could make notes as well as he could read them.

"Yes, I see," I murmured. "We don't use the term that way. Perhaps you don't understand my work. It's been an honest way to make a living for a few generations but it's so specialized it might sound foolish to someone outside the psychological industry. I psychoanalyze historical figures for history books (of course), and scholars, interested descendants, what all, and that's *all* I do."

"All you *have* done," Madison admitted, "but your government is certain that you can do this new work for them—in fact, that you are one of the few men prepared to locate this esoteric—that is, this odd aberration since I understand you often have to deal with it in analyzing the past. Doctor, we want you to find us a lonely man."

I laid my chrome yellow pen-

cil down carefully beside the cream-colored pad.

"History is full of loneliness—most of the so-called great men were rather neurotic—but I thought, Madison, that introspection was pretty much of a thing of the, well, past."

The government representative inhaled deeply and steeped his manicured fingers.

"Our system of childhood psycho-conditioning succeeds in burying loneliness in the subconscious so completely that even the records can't reveal if it was ever present."

I cleared my throat in order to stall, to think.

"I'm not acquainted with *contemporary* psychology, Madison. This comes as news to me. You mean people aren't really well-adjusted today, that they have just been conditioned to *act* as if they were?"

He nodded. "Yes, that's it. It's ironic. Now we need a lonely man and we can't find him."

"To pilot the interstellar spaceship?"

"For the *Evening Star*, yes," Madison agreed.

I picked up my pencil and held it between my two index fingers. I couldn't think of a damned thing to say.

"The whole problem," Madison was saying, "goes back to the early days of space travel. Men were confined in a small area facing infinite space for measureless periods in freefall. Men cracked—and ships, they crack-

ed up. But as space travel advanced ships got larger, carried more people, more ties and reminders of human civilization. Pilots became more *normal*."

I made myself look up at the earnest young man.

"But now," I said, "now you want me to find you an abnormal pilot who is used to being alone, who can stand it, maybe even like it?"

"Right."

I constructed a genuine smile for him for the first time.

"Madison, do you really think I can find your man when evidently all the government agencies have failed?"

The government representative pocketed his notebook deftly and then spread his hands clumsily for an instant.

"At least, Doctor," he said, "you may *know* it if you do find him."

It was a lonely job to find a lonely man, General, and maybe it was a crooked job to walk a crooked mile to find a crooked man.

I had to do it alone. No one else had enough experience in primitive psychology to recognize the phenomenon of loneliness, even as Madison had said.

The working conditions suited me. I had to think by myself but I had a comfortable staff to carry out my ideas. I liked my new office and the executive apartment the government supplied me. I had authority and respect and I had security. The government

assured me they would find further use for my services after I found them their man. I knew this was to keep me from dragging my tracks. But nevertheless I got right down to work.

I found Gordon Meyverik exactly five weeks from the day Madison first visited me in my old office.

"Of course, I planned the whole thing, Dr. Thorn," Gordon said crisply.

I knew what he meant although I hadn't guessed it before. He could tell it to me himself, I decided.

"Doesn't seem much to brag about," I said. "Anybody who can make up a grocery list should be able to figure out how to isolate himself on Seal Island."

He sat forward, a lean Viking with a hot Latin glance, very confident of himself.

"I reckoned on you locating me, on you hustling me back to pilot the *Evening Star*. That's why I holed in there."

"I can't accept your story," I lied cheerfully. "Nobody is going to maroon himself on an island for three years because of a wild possibility like that."

Meyverik smiled and his sureness swelled out until it almost jabbed me in the stomach.

"I took a broad gamble," he said, "but it hit the wire, didn't it?"

I didn't reply, but he had his answer.

Instead I scanned the report Madison had given me from In-

telligence concerning the man's unorthodox behavior.

Meyverik had quit his post-graduate studies and passed by the secured job that had been waiting for him eighteen months in a genial government office to barricade himself in an old shelter on Seal Island. It was hard to know what to make of it. He had brought impressive stores of food with him, books, sound and vision tapes but not telephone or television. For the next three years he had had no contact with humanity at all.

And he said he had planned it all.

"Sure," he drawled. "I knew the government was looking for somebody to steer the interstellar ship that's been gossip for decades. That job," he said distinctly, "is one I would give a lot to settle into."

I looked at him across my unlittered brand new desk and accepted his irritating blond masculinity, disliked him, admired him, and continued to examine him to decide on my *final* evaluation.

"You've given three years already," I said, examining the sheets of the report with which I was thoroughly familiar.

He twitched. He didn't like that, not spending three years. It was spendthrift, even if a good buy. He was planning on winding up somewhere important and to do it he had to invest his years properly.

"You are trying to make me believe you deliberately extrapo-

lated the government's need for a man who could stand being alone for long periods, and then tried to phoney up references for the work by staying on that island?"

"I don't like that word 'phoney'," Meyverik growled.

"No? You name your word for it."

Meyverik unhinged to his full height.

"It was *proof*," he said. "A test."

"A man can't test himself."

"A lot you know," the big blond snorted.

"I *know*," I told him drily. "A man who isn't a hopeless maniac depressive can't consciously create a test for himself that he knows he will fail. You proved you could stay alone on an island, buster. You didn't prove you could stay alone in a spaceship out in the middle of infinity for three years. Why didn't you rent a conventional rocket and try looking at some of our local space? It all looks much the same."

Meyverik sat down.

"I don't know why I didn't do that," he whispered.

Probably for the first time since he had got clever enough to beat up his big brother Meyverik was doubting himself, just a little, for just a time.

I don't know whether it was good or bad for him—contemporary psychology isn't in my line—but I knew I couldn't trust a cocky kid.

But I had to find out if he could still hit the target uncocked.

Stan Johnson was our second lonely man, remember, General?

He was stubborn.

I questioned him for a half hour the first day, two hours the second and on the third I turned him over to Madison.

Then as I was having my lunch I suddenly thought of something and made steps back to my office.

I got there just in time to grab Madison's bony wrist.

The thing in his fist was silver and sharp, a hypodermic needle. Johnson's forearm was tanned below the torn pastel sleeve. Two sad-faced young men were holding him politely by the shoulders in the canvas chair. Johnson met my glance expressionlessly.

I tugged on Madison's arm sharply.

"What's in that damned sticker?"

"Polypentium." Madison's face was as blank as Johnson's—only his body seemed at once tired and taut.

"What's it for?" I rasped.

"You're the psychologist," he said sharply.

I met his eyes and held on but it was impossible to stare him down.

"I don't know about physical methods, I told you. I've been dealing with people in books, films, tapes all my life, not living men up till now, can't you absorb that?"

"Apparently I've had more experience with these things than you then, Doctor. Shall I proceed?"

"You shall not," I cried omnisciently. "I know enough to understand we can't get the results the government wants by drugs. You going to put that away?"

Madison nodded once.

"All right," he said.

I unshackled my fingers and he put the shiny needle away in its case, in his suitcoat pocket.

"You understand, Thorn," he said, "that the general won't like this."

I turned around and looked at him.

"Did he order you to drug Johnson?"

The government agent shook his head.

"I didn't think so." I was beginning to understand government operations. "He only wanted it done. Get out."

Madison and his assistants marched out in orthodox Euclidian triangle formation.

The doors hissed shut.

"You know what?" The words jerked out from Johnson. "I think the bunch of you are crazy. *Crazy.*"

I decided to treat him like a client. Maybe that was the way contemporary psychologists handled their men.

I sat on the edge of the desk jauntily, confidently, and tried to let the domino mask up a father image.

"You may as well get it straight, Stan. The government needs you and it's pointless for you to say that need is unconstitutional or anything. Bring it up and it won't be long. When survival is outside the rules, the rules change."

The eyes of Johnson were strikingly like Meyverik's, dark and unsettled. Only this boy, younger, smaller than the Nordic, had an appropriate skin tone, stained by the tropical sun somewhere in his ancestral past. He dropped his gaze, expelled his breath mightily and pounded one angular knee with a half-closed fist.

"I'm not complaining about conscription without representation, Doctor, but I can't make any sense out of these fool questions you keep firing at me. What in blazes are you trying to get at? What kind of reason are you after for my staying by myself? I just do it because I like it that way."

With a galvanic jolt, I realized he was telling the painfully simple truth. I groaned at the realization.

Meyverik had convinced all of us that in our well-adjusted or at any rate well-conditioned world somebody had to have some purposeful *reason* in loneliness, solitude, so on that one instance our thinking had already been patterned, discarding all the other evidence of generations that the lonely man was only a personality type, like Johnson.

I felt I had achieved at least the quantum state of a fool.

Johnson silently studied the half-cupped hands laying in his lap.

"The hunting lodge in the Andes seemed as good a place as any to live after mother and father were killed. You might think it was lonesome at night in the mountains, but it isn't at all. You aren't alone when you can watch the burning worlds shadow the bow of God . . ."

I cleared my throat. The poor kid sounded like he would begin spouting something akin to poetry next.

"So I believe you," I told him. "That doesn't finish it. We have to convince *them*. I don't like this, but the simplest way would be to volunteer for their hibitor injection. I've found out Madison and his crowd don't believe men awake, only assorted dopes."

Johnson deflated his area of the room with his breath intake.

"Okay," he said at last. "I guess so."

When Johnson gave us what we needed to clear the problem, it didn't take me long to finish processing the rest of the handful of possible loners we had located. Unlike Johnson, all the rest had *reasons* for their self-imposed loneliness. Unlike Meyverik none of their reasons were associated with the interstellar flight. They instead involved literary research, swindles, isolated paranoid insanity and other

things in which the government had no interest.

Suddenly I found my job was done and that we had located only the two of them.

Madison read my final report braced on the edge of my desk, his hand comradely on my shoulder.

"Good job, Doc," he vouched replacing the papers on my blotter with a final rustle. "Now I've got news for you. The government wants you to *test* these boys for us now that you've found 'em for us."

I closed my jaw. "That's completely out of line—*my* line. I know you need a contemporary man for that job."

Madison punched me on the bicep, fast enough to hurt.

"Doc, after this project you know more about contemp' stuff than any professor who got his degree studying the textbooks you wrote."

It was impossible to dislike Madison except for practiced periods—that was probably one reason he had his job.

"All right," I growled. "Get your dirty pants off my clean desk and I'll get out the bottle. We'll—celebrate, huh?"

But you know how I felt, General? You remember how I tried to get out of it. I felt like I had led in the lambs and now I had to help shear them. As a part-time historian I can tell you there's a word for that—Judas goat. Give or take a word.

"It isn't the real thing, Doc,"

Madison spelled out for me, wearing a lemon twist of smile.

I looked at the twin banks of gauge-facings and circuit housings in which centered TV screens picturing either Meyverik or Johnson. Red and sea-green lights chased each other around the control boards, died, were born again. On the screens the three color negatives mixed to purple, shifted through a series of wrong combinations and settled to normal as the stereo-oscillation echoed, convexed insanely, and deepened to hold. Video reception is lousy from five hundred thousand miles out.

I was too eye-heavy to be surprised.

"Don't tell me this is *The Strange Flight of Richard Clayton* all over again?"

Madison clapped me on the shoulder and breathed mint at me, eyes on twittering round faces.

"Who wrote that? Poe? No, no mock-up to fake space conditions for them but calculate the cost of the *real* interstellar ship. We couldn't trust either of them with it yet. You didn't really think we could afford *two* ships. Why do you think we haven't told one man about his opposite in a second ship? No safety margin allowable in our appropriation, Doc. Or so they tell me. There's enough fuel and food to take Johnson and Meyverik a long way but not the distance."

He shook his lean head almost wistfully.

"Damn it, Madison, do you

mean I've been beating my lobes out for weeks for *nothing*? I tested them. I checked them out. Either was capable of making the flight successfully—for their own different reasons."

Madison took his hand off my shoulder and made a fist of it.

"I'm not questioning your decision! Will you ram that through your obscene skull, Thorn!"

"Who is?" I whispered.

"Not me. Not I, not I."

"The general," I announced.

"Just not me." Was he actually trembling? But it wasn't concern about what I thought of him. Somebody closer, maybe. Things were building up for him.

He jammed his nose almost up against the glass dial surfaces, swaying gently in his cups, staring slightly cross-eyed at the arrowed numbers.

"You'll continue your tests from here," Madison said. "Tell them they are going to die."

My face was at once cool and damp.

"That's a tough examination," I gasped.

"A lie," Madison told me. "The boys at Psychicentre worked out the problems."

"You told me you wanted me!" I screamed at him furiously.

"Control your passionate, dainty voice. You worked well with those two. The experts could work through you better."

"Right through me, like a razor blade through margarine," I said. "It's not fair."

"No, it's science. Psychology as a science, not an art. Don't damn me—I'm not the inventor," Madison continued.

"I'm one of them," I murmured, "but I'd just as rather you didn't blame me either."

Madison punched the button for me with a palsied, manicured thumb.

"Guess what, Meyverik?" I said viciously. "You're going to die."

"What the blazes are you babbling about?" the blond doll snapped at me from the box of the video screen.

I scanned the typed, stiff-backed Idiot Prompters Madison shoved into my fist. "It's—true. You can't get out alive."

"What's happened?" His face perfectly blank.

"Nothing out of the ordinary," I said. "They have just informed me it was planned this way. It wasn't possible to build a round-trip rocket yet. You need a lot of fuel to make course adjustments for the curvature of space, so forth. The radio will send back your reports on the Alpha Centaurian planets. Undoubtedly by all rules of probability they won't support life without a mass of equipment. They suckered me too, Meyverik, I swear. You turning back?"

"No," he said almost immediately.

"I thought you were after the rewards, trained to get them. You won't be able to enjoy them posthumously."

The video blanked. He had turned off his camera.

"I guess I thought so," Meyverik's voice said. "But I kind of like it out here—alone. I like people but back there there's no one to *touch*. They smother you but you can't reach them. I can't do anything better back there than I can do here."

Madison got a bottle and he and I got sloppily drunk, leaning on each other, singing innocently obscene songs of our youth. The technicians, good government men, were openly disgusted with us.

Two hours after we had contacted Meyverik, I left Madison snoring on the desk and lurched to the control board, bunching my soiled shirt at the throat with my hand.

I called Johnson.

"Going to die, Johnson. Tricked you. Can't get back, Johnson. Not ever. No fuel. Ha, you can't ever go home again, Johnson. Like that, you damned runny-nosed little poet?"

His dark face worked weakly.

Ha, he sure as thunderation *didn't* like it.

He asked for the bloody details and I fed them to him.

"Turning back, aren't you?" I jeered.

"I just wanted a place and a time for thinking," he said across the Solar System. "But I'll die and I don't know if you can dream in death."

"Just what I thought," I sneered.

"I'm not turning back," he said slowly. "People need me. I've got a job to do. Haven't I? Haven't I?"

"No," I screamed at him. "You're just using that as an excuse to kill yourself. Don't try to tell me you're not weak! Don't you try to make me think you're strong! Hear me, Johnson, hear me?"

But he couldn't hear me.

One of the government technicians had broken the contact before that last spurt.

"This is good," Madison said, pawing fuzzily at his pocket. "Really—good."

I studied the three or four watchdials wobbling up and down my elongated wrist. They seemed to say it was almost sunrise.

I leered at Madison. "Yeah, yeah, what is it? Huh, huh?"

He shoved a crumpled card into my lax fingers.

"Now," he said, "now tell them—"

"Yeah, yeah."

"Tell them the whole thing is useless."

My stomach retched drily, grinding the sober pills to dust between its ulcerating walls.

"Meyverik," I said to the empty video tube, "they made a mistake. They underestimated curvature. You can't reach Alpha Centauri. You can't correct enough. Free space is all you'll hit. Ever. You may as well come home."

The soft voice came out of nowhere, from nothing.

"I don't want to come back. I like it here. This is what I've always been trying to get and I never knew it."

Madison grabbed my arm with pronged fingers.

"Shut up, Doc. That's just the way the government wants him to be."

"Johnson," I said to the creased face in the screen, "they made a mistake. They underestimated curvature. You can't reach Alpha Centauri. You can't correct enough. Free space is all you'll hit. Ever. You may as well come—back."

Johnson sighed, a whisper of breath across the miles.

"I'll keep going. No one has ever been so far out before. I can report valuable things."

I stood there. The textbooks report it takes muscular effort to frown, more so than to smile. But my face seemed to flow into the lines of pain so hard it ached without any effort of my will. And I knew it would *hurt* to smile.

"They passed the final test," Madison said at my side. "Tell them it was a test."

I would do it for him. I didn't need to do it for myself.

I motioned the technician to open both channels.

"The ship you are in," I said, with no need to tell them of each other, "is not the real *Evening Star*. It will *not* take you to the stars. This has been only a *test* to credit your fitness to pilot the

real interstellar craft of the Star Project. You must return to the Lunar Satellite. This is a direct order."

The two screens remained blank. Only the windless silence of space echoed over Johnson's channel, but the tapes later proved that I actually did hear a whispered laugh from Meyverik.

I faced Madison.

"They won't come back. They could have passed any test except the fact that what we put them through was only a test. For their own reasons, they will keep going. As far as they can."

Madison took out his notebook and seemed to look for vital information. Except that he never cracked the cover.

"Of course, we can't get them back if they won't come," he said. "If cybernetic remotes functioned operationally at this distance we wouldn't have to send men at all."

He replaced the pocket secretary and looked at me edgewise, speculatively.

I touched his arm.

"Let's find another bottle," I said.

He stepped back.

"You found them. You tested them. You killed them."

And the government man walked away and left me standing with a murderer.

You see it now, don't you, General?

What I'm carrying around on my back is guilt. Not guilt com-

plex, not guilt fixation, just plain old Abel-Cain *guilt*.

In this nice, well-ordered age I'm a killer and everybody knows it.

You see our mistake, General.

We sent men with variable amounts of loneliness. These amounts could alter. But now we have a golden opportunity.

The *Evening Star* is waiting and I have found for you a man with the true measure of loneliness. It is impossible for this man to become any more or any

less lonely. It isn't the Ultimate Possible Loneliness, understand that, General.

It's just that by himself or with others he is always in a crowd of three, no more, no less.

The interstellar ship is waiting.

So tell me, General, have you ever seen a lonelier man than me, your humble servitor, Dr. Thorn? No, I mean it. Have you?

THE END



"Oh, come now, Furbish—you're only in there for a few seconds at a time!"

THE JUPITER WEAPON

By CHARLES L. FONTENAY

He was a living weapon of destruction — immeasurably powerful, utterly invulnerable. There was only one question: Was he human?

TRELLA feared she was in for trouble even before Motwick's head dropped forward on his arms in a drunken stupor. The two evil-looking men at the table nearby had been watching her surreptitiously, and now they shifted restlessly in their chairs.

Trella had not wanted to come to the Golden Satellite. It was a squalid saloon in the rougher section of Jupiter's View, the terrestrial dome-colony on Gany-mede. Motwick, already, drunk, had insisted.

A woman could not possibly make her way through these streets alone to the better section of town, especially one clad in a silvery evening dress. Her only hope was that this place had a telephone. Perhaps she could call one of Motwick's friends; she had no one on Gany-

mede she could call a real friend herself.

Tentatively, she pushed her chair back from the table and arose. She had to brush close by the other table to get to the bar. As she did, the dark, slick-haired man reached out and grabbed her around the waist with a steely arm.

Trella swung with her whole body, and slapped him so hard he nearly fell from his chair. As she walked swiftly toward the bar, he leaped up to follow her.

There were only two other people in the Golden Satellite: the fat, mustached bartender and a short, square-built man at the bar. The latter swung around at the pistol-like report of her slap, and she saw that, though no more than four and a half feet tall, he was as heavily muscled as a lion.

His face was clean and open, with close-cropped blond hair and honest blue eyes. She ran to him.

"Help me!" she cried. "Please help me!"

He began to back away from her.

"I can't," he muttered in a deep voice. "I can't help you. I can't do anything."

The dark man was at her heels. In desperation, she dodged around the short man and took refuge behind him. Her protector was obviously unwilling, but the dark man, faced with his massiveness, took no chances. He stopped and shouted:

"Kregg!"

The other man at the table arose, ponderously, and lumbered toward them. He was immense, at least six and a half feet tall, with a brutal, vacant face.

Evading her attempts to stay behind him, the squat man began to move down the bar away from the approaching Kregg. The dark man moved in on Trella again as Kregg overtook his quarry and swung a huge fist like a sledgehammer.

Exactly what happened, Trella wasn't sure. She had the impression that Kregg's fist connected squarely with the short man's chin *before* he dodged to one side in a movement so fast it was a blur. But that couldn't have been, because the short man wasn't moved by that blow that would have felled a steer,

and Kregg roared in pain, grabbing his injured fist.

"The bar!" yelled Kregg. "I hit the damn bar!"

At this juncture, the bartender took a hand. Leaning far over the bar, he swung a full bottle in a complete arc. It smashed on Kregg's head, splashing the floor with liquor, and Kregg sank stunned to his knees. The dark man, who had grabbed Trella's arm, released her and ran for the door.

Moving agilely around the end of the bar, the bartender stood over Kregg, holding the jagged-edged bottleneck in his hand menacingly.

"Get out!" rumbled the bartender. "I'll have no coppers raiding my place for the likes of you!"

Kregg stumbled to his feet and staggered out. Trella ran to the unconscious Motwick's side.

"That means you, too, lady," said the bartender beside her. "You and your boy friend get out of here. You oughtn't to have come here in the first place."

"May I help you, Miss?" asked a deep, resonant voice behind her.

She straightened from her anxious examination of Motwick. The squat man was standing there, an apologetic look on his face.

She looked contemptuously at the massive muscles whose help had been denied her. Her arm ached where the dark man had grasped it. The broad face be-

fore her was not unhandsome, and the blue eyes were disconcertingly direct, but she despised him for a coward.

"I'm sorry I couldn't fight those men for you, Miss, but I just couldn't," he said miserably, as though reading her thoughts. "But no one will bother you on the street if I'm with you."

"A lot of protection you'd be if they did!" she snapped. "But I'm desperate. You can carry him to the Stellar Hotel for me."

The gravity of Ganymede was hardly more than that of Earth's moon, but the way the man picked up the limp Motwick with one hand and tossed him over a shoulder was startling: as though he lifted a feather pillow. He followed Trella out the door of the Golden Satellite and fell in step beside her. Immediately she was grateful for his presence. The dimly lighted street was not crowded, but she didn't like the looks of the men she saw.

The transparent dome of Jupiter's View was faintly visible in the reflected night lights of the colonial city, but the lights were overwhelmed by the giant, vari-colored disc of Jupiter itself, riding high in the sky.

"I'm Quest Mansard, Miss," said her companion. "I'm just in from Jupiter."

"I'm Trella Nuspar," she said, favoring him with a green-eyed glance. "You mean Io, don't you—or Moon Five?"

"No," he said, grinning at

her. He had an engaging grin, with even white teeth. "I meant Jupiter."

"You're lying," she said flatly. "No one has ever landed on Jupiter. It would be impossible to blast off again."

"My parents landed on Jupiter, and I blasted off from it," he said soberly. "I was born there. Have you ever heard of Dr. Eriklund Mansard?"

"I certainly have," she said, her interest taking a sudden upward turn. "He developed the surgiscope, didn't he? But his ship was drawn into Jupiter and lost."

"It was drawn into Jupiter, but he landed it successfully," said Quest. "He and my mother lived on Jupiter until the oxygen equipment wore out at last. I was born and brought up there, and I was finally able to build a small rocket with a powerful enough drive to clear the planet."

She looked at him. He was short, half a head shorter than she, but broad and powerful as a man might be who had grown up in heavy gravity. He trod the street with a light, controlled step, seeming to deliberately hold himself down.

"If Dr. Mansard succeeded in landing on Jupiter, why didn't anyone ever hear from him again?" she demanded.

"Because," said Quest, "his radio was sabotaged, just as his ship's drive was."

"Jupiter strength," she murmured, looking him over coolly.

"You wear Motwick on your shoulder like a scarf. But you couldn't bring yourself to help a woman against two thugs."

He flushed.

"I'm sorry," he said. "That's something I couldn't help."

"Why not?"

"I don't know. It's not that I'm afraid, but there's something in me that makes me back away from the prospect of fighting anyone."

Trella sighed. Cowardice was a state of mind. It was peculiarly inappropriate, but not unbelievable, that the strongest and most agile man on Ganymede should be a coward. Well, she thought with a rush of sympathy, he couldn't help being what he was.

They had reached the more brightly lighted section of the city now. Trella could get a cab from here, but the Stellar Hotel wasn't far. They walked on.

Trella had the desk clerk call a cab to deliver the unconscious Motwick to his home. She and Quest had a late sandwich in the coffee shop.

"I landed here only a week ago," he told her, his eyes frankly admiring her honey-colored hair and comely face. "I'm heading for Earth on the next spaceship."

"We'll be traveling companions, then," she said. "I'm going back on that ship, too."

For some reason she decided against telling him that the assignment on which she had

come to the Jupiter system was to gather his own father's notebooks and take them back to Earth.

Motwick was an irresponsible playboy whom Trella had known briefly on Earth, and Trella was glad to dispense with his company for the remaining three weeks before the spaceship blasted off. She found herself enjoying the steadier companionship of Quest.

As a matter of fact, she found herself enjoying his companionship more than she intended to. She found herself falling in love with him.

Now this did not suit her at all. Trella had always liked her men tall and dark. She had determined that when she married it would be to a curly-haired six-footer.

She was not at all happy about being so strongly attracted to a man several inches shorter than she. She was particularly unhappy about feeling drawn to a man who was a coward.

The ship that they boarded on Moon Nine was one of the newer ships that could attain a hundred-mile-per-second velocity and take a hyperbolic path to Earth, but it would still require fifty-four days to make the trip. So Trella was delighted to find that the ship was the *Cometfire* and its skipper was her old friend, dark-eyed, curly-haired Jakdane Gille.

"Jakdane," she said, flirting with him with her eyes as in

days gone by, "I need a chaperon this trip, and you're ideal for the job."

"I never thought of myself in quite that light, but maybe I'm getting old," he answered, laughing. "What's your trouble, Trella?"

"I'm in love with that huge chunk of man who came aboard with me, and I'm not sure I ought to be," she confessed. "I may need protection against myself till we get to Earth."

"If it's to keep you out of another fellow's clutches, I'm your man," agreed Jakdane heartily. "I always had a mind to save you for myself. I'll guarantee you won't have a moment alone with him the whole trip."

"You don't have to be that thorough about it," she protested hastily. "I want to get a little enjoyment out of being in love. But if I feel myself weakening too much, I'll holler for help."

The *Cometfire* swung around great Jupiter in an opening arc and plummeted ever more swiftly toward the tight circles of the inner planets. There were four crew members and three passengers aboard the ship's tiny personnel sphere, and Trella was thrown with Quest almost constantly. She enjoyed every minute of it.

She told him only that she was a messenger, sent out to Ganymede to pick up some important papers and take them back to Earth. She was tempted to tell him what the papers were. Her employer had impressed up-

on her that her mission was confidential, but surely Dom Blessing could not object to Dr. Mansard's son knowing about it.

All these things had happened before she was born, and she did not know what Dom Blessing's relation to Dr. Mansard had been, but it must have been very close. She knew that Dr. Mansard had invented the surgiscope.

This was an instrument with a three-dimensional screen as its heart. The screen was a cubical frame in which an apparently solid image was built up of an object under an electron microscope.

The actual cutting instrument of the surgiscope was an ion stream. By operating a tool in the three-dimensional screen, corresponding movements were made by the ion stream on the object under the microscope. The principal was the same as that used in operation of remote control "hands" in atomic laboratories to handle hot material, and with the surgiscope very delicate operations could be performed at the cellular level.

Dr. Mansard and his wife had disappeared into the turbulent atmosphere of Jupiter just after his invention of the surgiscope, and it had been developed by Dom Blessing. Its success had built Spaceway Instruments, Incorporated, which Blessing headed.

Through all these years since Dr. Mansard's disappearance,

Blessing had been searching the Jovian moons for a second, hidden laboratory of Dr. Mansard. When it was found at last, he sent Trella, his most trusted secretary, to Ganymede to bring back to him the notebooks found there.

Blessing would, of course, be happy to learn that a son of Dr. Mansard lived, and would see that he received his rightful share of the inheritance. Because of this, Trella was tempted to tell Quest the good news herself; but she decided against it. It was Blessing's privilege to do this his own way, and he might not appreciate her meddling.

At midtrip, Trella made a rueful confession to Jakdane.

"It seems I was taking unnecessary precautions when I asked you to be a chaperon," she said. "I kept waiting for Quest to do something, and when he didn't I told him I loved him."

"What did he say?"

"It's very peculiar," she said unhappily. "He said he *can't* love me. He said he wants to love me and he feels that he should, but there's something in him that refuses to permit it."

She expected Jakdane to salve her wounded feelings with a sympathetic pleasantry, but he did not. Instead, he just looked at her very thoughtfully and said no more about the matter.

He explained his attitude after Asrange ran amuck.

Asrange was the third passen-

ger. He was a lean, saturnine individual who said little and kept to himself as much as possible. He was distantly polite in his relations with both crew and other passengers, and never showed the slightest spark of emotion . . . until the day Quest squirted coffee on him.

It was one of those accidents that can occur easily in space. The passengers and the two crewmen on that particular waking shift (including Jakdane) were eating lunch on the center-deck. Quest picked up his bulb of coffee, but inadvertently pressed it before he got it to his lips. The coffee squirted all over the front of Asrange's clean white tunic.

"I'm sorry!" exclaimed Quest in distress.

The man's eyes went wide and he snarled. So quickly it seemed impossible, he had unbuckled himself from his seat and hurled himself backward from the table with an incoherent cry. He seized the first object his hand touched—it happened to be a heavy wooden cane leaning against Jakdane's bunk—propelled himself like a projectile at Quest.

Quest rose from the table in a sudden uncoiling of movement. He did not unbuckle his safety belt—he rose and it snapped like a string.

For a moment Trella thought he was going to meet Asrange's assault. But he fled in a long leap toward the companionway leading to the astrogation deck

above. Landing feet-first in the middle of the table and rebounding, Asrange pursued with the stick upraised.

In his haste, Quest missed the companionway in his leap and was cornered against one of the bunks. Asrange descended on him like an avenging angel and, holding onto the bunk with one hand, rained savage blows on his head and shoulders with the heavy stick.

Quest made no effort to retaliate. He cowered under the attack, holding his hands in front of him as if to ward it off. In a moment, Jakdane and the other crewman had reached Asrange and pulled him off.

When they had Asrange in irons, Jakdane turned to Quest, who was now sitting unhappily at the table.

"Take it easy," he advised. "I'll wake the psychosurgeon and have him look you over. Just stay there."

Quest shook his head.

"Don't bother him," he said. "It's nothing but a few bruises."

"Bruises? Man, that club could have broken your skull! Or a couple of ribs, at the very least."

"I'm all right," insisted Quest; and when the skeptical Jakdane insisted on examining him carefully, he had to admit it. There was hardly a mark on him from the blows.

"If it didn't hurt you any more than that, why didn't you take that stick away from him?"

demanded Jakdane. "You could have, easily."

"I couldn't," said Quest miserably, and turned his face away.

Later, alone with Trella on the control deck, Jakdane gave her some sober advice.

"If you think you're in love with Quest, forget it," he said.

"Why? Because he's a coward? I know that ought to make me despise him, but it doesn't any more."

"Not because he's a coward. Because he's an android!"

"What? Jakdane, you can't be serious!"

"I am. I say he's an android, an artificial imitation of a man. It all figures."

"Look, Trella, he said he was born on Jupiter. A human could stand the gravity of Jupiter, inside a dome or a ship, but what human could stand the rocket acceleration necessary to break free of Jupiter? Here's a man strong enough to break a spaceship safety belt just by getting up out of his chair against it, tough enough to take a beating with a heavy stick without being injured. How can you believe he's really human?"

Trella remembered the thug Gregg striking Quest in the face and then crying that he had injured his hand on the bar.

"But he said Dr. Mansard was his father," protested Trella.

"Robots and androids frequently look on their makers as their parents," said Jakdane. "Quest may not even know he's

artificial. Do you know how Mansard died?"

"The oxygen equipment failed, Quest said."

"Yes. Do you know when?"

"No. Quest never did tell me, that I remember."

"He told me: a year before Quest made his rocket flight to Ganymede! If the oxygen equipment failed, how do you think Quest lived in the poisonous atmosphere of Jupiter, if he's human?"

Trella was silent.

"For the protection of humans, there are two psychological traits built into every robot and android," said Jakdane gently. "The first is that they can never, under any circumstances, attack a human being, even in self defense. The second is that, while they may understand sexual desire objectively, they can never experience it themselves.

"Those characteristics fit your man Quest to a T, Trella. There is no other explanation for him: he must be an android."

Trella did not want to believe Jakdane was right, but his reasoning was unassailable. Looking upon Quest as an android, many things were explained: his great strength, his short, broad build, his immunity to injury, his refusal to defend himself against a human, his inability to return Trella's love for him.

It was not inconceivable that she should have unknowingly fallen in love with an android.

Humans could love androids, with real affection, even knowing that they were artificial. There were instances of android nursemaids who were virtually members of the families owning them.

She was glad now that she had not told Quest of her mission to Ganymede. He thought he was Dr. Mansard's son, but an android had no legal right of inheritance from his owner. She would leave it to Dom Blessing to decide what to do about Quest.

Thus she did not, as she had intended originally, speak to Quest about seeing him again after she had completed her assignment. Even if Jakdane was wrong and Quest was human—as now seemed unlikely—Quest had told her he could not love her. Her best course was to try to forget him.

Nor did Quest try to arrange with her for a later meeting.

"It has been pleasant knowing you, Trella," he said when they left the G-boat at White Sands. A faraway look came into his blue eyes, and he added: "I'm sorry things couldn't have been different, somehow."

"Let's don't be sorry for what we can't help," she said gently, taking his hand in farewell.

Trella took a fast plane from White Sands, and twenty-four hours later walked up the front steps of the familiar brownstone house on the outskirts of Washington.

Dom Blessing himself met her at the door, a stooped, graying

man who peered at her over his spectacles.

"You have the papers, eh?" he said, spying the brief case. "Good, good. Come in and we'll see what we have, eh?"

She accompanied him through the bare, windowless anteroom which had always seemed to her such a strange feature of this luxurious house, and they entered the big living room. They sat before a fire in the old-fashioned fireplace and Blessing opened the brief case with trembling hands.

"There are things here," he said, his eyes sparkling as he glanced through the notebooks. "Yes, there are things here. We shall make something of these, Miss Trella, eh?"

"I'm glad they're something you can use, Mr. Blessing," she said. "There's something else I found on my trip, that I think I should tell you about."

She told him about Quest.

"He thinks he's the son of Dr. Mansard," she finished, "but apparently he is, without knowing it, an android Dr. Mansard built on Jupiter."

"He came back to Earth with you, eh?" asked Blessing intently.

"Yes. I'm afraid it's your decision whether to let him go on living as a man or to tell him he's an android and claim ownership as Dr. Mansard's heir."

Trella planned to spend a few days resting in her employer's spacious home, and then to take a short vacation before resuming her duties as his confidential

secretary. The next morning when she came down from her room, a change had been made.

Two armed men were with Dom Blessing at breakfast and accompanied him wherever he went. She discovered that two more men with guns were stationed in the bare anteroom and a guard was stationed at every entrance to the house.

"Why all the protection?" she asked Blessing.

"A wealthy man must be careful," said Blessing cheerfully. "When we don't understand all the implications of new circumstances, we must be prepared for anything, eh?"

There was only one new circumstance Trella could think of. Without actually intending to, she exclaimed:

"You aren't afraid of Quest? Why, an android can't hurt a human!"

Blessing peered at her over his spectacles.

"And what if he isn't an android, eh? And if he is—what if old Mansard didn't build in the prohibition against harming humans that's required by law? What about that, eh?"

Trella was silent, shocked. There was something here she hadn't known about, hadn't even suspected. For some reason, Dom Blessing feared Dr. Erik Lund Mansard . . . or his heir . . . or his mechanical servant.

She was sure that Blessing was wrong, that Quest, whether man or android, intended no

harm to him. Surely, Quest would have said something of such bitterness during their long time together on Ganymede and aspace, since he did not know of Trella's connection with Blessing. But, since this was to be the atmosphere of Blessing's house, she was glad that he decided to assign her to take the Mansard papers to the New York laboratory.

Quest came the day before she was scheduled to leave.

Trella was in the living room with Blessing, discussing the instructions she was to give to the laboratory officials in New York. The two bodyguards were with them. The other guards were at their posts.

Trella heard the doorbell ring. The heavy oaken front door was kept locked now, and the guards in the anteroom examined callers through a tiny window.

Suddenly alarm bells rang all over the house. There was a terrific crash outside the room as the front door splintered. There were shouts and the sound of a shot.

"The steel doors!" cried Blessing, turning white. "Let's get out of here."

He and his bodyguards ran through the back of the house out of the garage.

Blessing, ahead of the rest, leaped into one of the cars and started the engine.

The door from the house shattered and Quest burst through. The two guards turned and fired together.

He could be hurt by bullets. He was staggered momentarily.

Then, in a blur of motion, he sprang forward and swept the guards aside with one hand with such force that they skidded across the floor and lay in an unconscious heap against the rear of the garage. Trella had opened the door of the car, but it was wrenched from her hand as Blessing stepped on the accelerator and it leaped into the driveway with spinning wheels.

Quest was after it, like a chunky deer, running faster than Trella had ever seen a man run before.

Blessing slowed for the turn at the end of the driveway and glanced back over his shoulder. Seeing Quest almost upon him, he slammed down the accelerator and twisted the wheel hard.

The car whipped into the street, careened, and rolled over and over, bringing up against a tree on the other side in a twisted tangle of wreckage.

With a horrified gasp, Trella ran down the driveway toward the smoking heap of metal. Quest was already beside it, probing it. As she reached his side, he lifted the torn body of Dom Blessing. Blessing was dead.

"I'm lucky," said Quest soberly. "I would have murdered him."

"But why, Quest? I knew he was afraid of you, but he didn't tell me why."

"It was conditioned into me," answered Quest. "I didn't know

it until just now, when it ended, but my father conditioned me psychologically from my birth to the task of hunting down Dom Blessing and killing him. It was an unconscious drive in me that wouldn't release me until the task was finished.

"You see, Blessing was my father's assistant on Ganymede. Right after my father completed development of the surgiscope, he and my mother blasted off for Io. Blessing wanted the valuable rights to the surgiscope, and he sabotaged the ship's drive so it would fall into Jupiter.

"But my father was able to control it in the heavy atmosphere of Jupiter, and landed it successfully. I was born there, and he conditioned me to come to Earth and track down Blessing. I know now that it was part of the conditioning that I was unable to fight any other man until my task was finished: it might have gotten me in trouble and diverted me from that purpose."

More gently than Trella would have believed possible for his Jupiter-strong muscles, Quest took her in his arms.

"Now I can say I love you," he said. "That was part of the conditioning too: I couldn't love any woman until my job was done."

Trella disengaged herself.

"I'm sorry," she said. "Don't you know this, too, now: that you're not a man, but an android?"

He looked at her in astonish-

ment, stunned by her words.

"What in space makes you think that?" he demanded.

"Why, Quest, it's obvious," she cried, tears in her eyes. "Everything about you . . . your build, suited for Jupiter's gravity . . . your strength . . . the fact that you were able to live in Jupiter's atmosphere after the oxygen equipment failed. I know you think Dr. Mansard was your father, but androids often believe that."

He grinned at her.

"I'm no android," he said confidently. "Do you forget my father was inventor of the surgiscope? He knew I'd have to grow up on Jupiter, and he operated on the genes before I was born. He altered my inherited characteristics to adapt me to the climate of Jupiter . . . even to being able to breathe a chlorine atmosphere as well as an oxygen atmosphere."

Trella looked at him. He was not badly hurt, any more than an elephant would have been, but his tunic was stained with red blood where the bullets had struck him. Normal android blood was green.

"How can you be sure?" she asked doubtfully.

"Androids are made," he answered with a laugh. "They don't grow up. And I remember my boyhood on Jupiter very well."

He took her in his arms again, and this time she did not resist. His lips were very human.

THE END

QUESTION OF COMFORT

By LES COLLINS

The Gravity Gang was a group of geniuses—devoting its brilliance to creating a realistic Solar System for Disneyland. That was the story, anyway. No one would have believed all that stuff about cops and robbers from outer space.

MY JOB, finished now, had been getting them to Disneyland. The problem was bringing one in particular—one I had to find. The timing was uncomfortably close.

I'd taken the last of the yellow pills yesterday, tossing the bottle away with a sort of indifferent frustration. I won or lost on the validity of my logic—and whether I'd built a better mousetrap.

The pills had given me 24 hours before the fatal weakness took hold; nevertheless, I waited as long as I could. That left me less than an hour, now; strangely, as I walked in the eerie darkness of an early morning, virtually deserted Disneyland, I felt calm. And yet, my life depended on the one I sought being inside the Tour building.

I was seeking a monster of

terrible potential, yet so innocuous looking that he'd not stand out. I couldn't produce him, couldn't say where in the world he was. Nevertheless he was the basis, the motivation second only to mine. I took the long, hard way—three years—making him come to me.

Two years were devoted to acclimitization, learning, and then swinging this job: just to put the idea across.

Assigned to Disneyland Public Relations in the offices at Burbank, I'd begun with the usual low-pay, low-level jobs. I didn't, couldn't mind; at least I had a foot in the right door. Within six months, I reached a point where I could present the idea.

It had enough merit. My boss—35 years' experience enabled him to recognize a good idea—

took it to his boss who took it to The Boss.

Tomorrowland is the orphan division of Disneyland, thrown in as sop to those interested more in the future than the past. My idea was to sex up Tomorrowland: Tour the Solar System.

Not really, but we'd bill it that way. The Tour of the Solar System Building was to be large. Its rooms would reproduce environments of parts of the System, as best we knew them.

I'll never forget the first planning session when we realists were underdogs, yet swung the basic direction. By then, the Hollywood Mind had appeared. The Hollywood Mind is definitely a real thing, a vicious thing, a blank thing, that paternalistically insists It knows what the public wants.

There was general agreement on broad outlines. Trouble began over Venus.

"Of course," said one of the Minds, "we'll easily create a swampy environment—"

I burst out with quiet desperation: "May I comment?"

The realists were churning. Right there, sides were being chosen. I let all know my side immediately.

"Venus is hot, but it's desert heat. Continuous dust storms with fantastic winds—"

"People'd never go for that junk," interrupted the Mind. "Everyone knows Venus is swampy."

"Everyone whose reading tastes matured no further than Edgar Rice Burroughs!"

The mind, with a if-you-know-so-much--why-aintcha-rich look, sneered, "How come you know all about it?"

Speechless, I spread my hands. This joker was leading with his chin, forcing the fight. I had to hit him again; if I lost, I lost good. "A person," I said slowly and rhythmically, "with normal intelligence and a minute interest in the universe, will keep step with the major sciences, at least on an elementary level. I must stress the qualification of normal intelligence."

The Mind, face contorted, was determined to get me. I was in a very vulnerable spot; more important, so was the idea.

Mind began an emotional tirade, and mentally I damned him. It couldn't have mattered to him what environment we used, but he was politicking where he shouldn't.

There was silence when he stopped. This was the crux; The Boss would decide. I held my breath.

He said, "We'll make it hot and dusty." The realists had won; the rest climbed on the bandwagon but quick; and the temple was cleansed.

It was natural—because at the moment I was fair-haired—for the project to become mine. God knows, I worked hard for it. I'd have to watch the Mind, though; he would make things as difficult as possible.

However, he'd proved he was the one person I wasn't seeking. One down and 2,499,999,999 to go.

Within a few days, a new opposition coalition formed, headed by the Mind. Fortunately, they helped. I'd hesitated on one last point. Pushed, I gambled the momentum of the initial enthusiasm would carry it.

Originally the plan was a series of rooms, glassed off, that people could stare into. There was something much better; engineering and I spent 36 hours straight, figuring costs, juggling space and equipment, until the modification didn't look too expensive—juggling is always possible in technical proposals. For the results, the cost was worth it. I hand-carried the proposal in.

Why not take people *through* the rooms? We could even design a simulated, usable space-suit. There'd be airlock doors between the rooms for effectiveness, insulation, economy. No children under ten allowed; no adults over 50. They'd go through in groups of 10 or 11.

Sure, I realized this was the most elaborate, most ambitious concession ever planned. The greatest ever attempted in its line, it would cost—both us and the public. But people will pay for value. They'd go for a buck-and-a-half or even two; the lines of those filing past the windows, at 50 cents a crack, would also bring in the dough.

They bought it. Not all—they nixed my idea of creating exact environmental conditions; and I didn't insist, luck and Hollywood being what they are.

From the first, I established a special group to work on one problem. They were dubbed the Gravity Gang, and immediately after, the GG. I hired them for the gravity of the situation, a standard gag that, once uttered, became as trite as the phrase. The Tour's realism would be affected by normal weight sensations.

The team consisted of a female set designer—who'd turn any male head—from the Studio, a garage mechanic with 30 years' experience, an electronics engineer, a science fiction writer, and the prettiest competent secretary available. I found Hazel, discovering with delight she'd had three years of anthropology at UCLA.

As soon as they assembled, I explained their job: find a way to give the illusion of lessened gravity.

Working conditions would be the best possible—why I'd wanted the women pretty—and their time was their own. I found the GG responded by working 10 hours a day and thinking another 14. They were that sort.

I couldn't know the GG was foredoomed to failure by its very collective nature; nor could I know, by its nature, the GG meant the difference between my success and failure.

The opposition put one over;

we'd started referring to the job as Tour of the System Project. Next day, it was going the rounds as TS project. Words, words, and men will always fight with words.

Actually, the initials were worthy of the name. The engineering problems mounted like crazy. Words, words, and one of them got to the outside world. Or maybe it was the additional construction crew we hired.

One logical spot for the building was next to the moon flight. The Tour building now would be bigger than first planned, so we extended it southeasterly. This meant changing the roadbed of the Sante Fe & Disneyland R.R. It put me up to my ears in plane surveying—and gave me a nasty shock.

I looked up at someone's shout, in time to see a ton of cat rolling down the embankment at me.

What we were doing was easy. Using a spiral to transition gradually from tangent to circular curve and from circular curve to tangent. Easy? Yeah. Sure.

If this was my baby, I'd damned well better know its personality traits. I was out with the surveyors, I was out with the construction gang, I was out at the wrong time.

As the yellow beast, mindless servant of man, thundered down, I dove for the rocks. Thank God for the rocks—we'd had to import them: the soil in

Orange County is fine for oranges, but too soft for train roadbeds.

Choking on the dust, I rolled over. The cat perched, grinning drunkenly, on the rocks. The opposition or an accident? Surely the Mind wasn't *that* desperate. But I was; I had to keep the idea alive, for myself as well as completion of the original mission.

Several million hands pulled me out; several million more patted away the dust. Motionless, I'd just seen the driver of the cat. Seen him—and was sorry.

He stood tall but hunched over; gaunt, with pasty skin, vapid eyes, and a kind of yellow-nondescript hair.

It wasn't the physical characteristics, very similar to mine, that bothered me—once after an incomplete pass, I'd been told by a young lady that I was a "thin, sallow lecher." I was swept by waves of impending trouble, more frightened of him than of the opposition in toto. Then, relieved, I realized the man wasn't the one I was expecting.

Back in my office, I wasn't allowed the luxury of nervous reaction. Our spacesuit man wanted an Ok on design changes. Changes? What changes? . . . Oh, yes, go ahead.

A materials man wanted to know about weight. I told him where to go—for the information.

A written progress report from the GG briefly, sardonical-

ly, said: "All the talk about increased costs and lowered budget has decided us to ask if any aircraft, missile, or AEC groups have come up with anti-gravity. It'd be a lot simpler that way. Love and kisses."

I shrugged, wrote them a memo to take a week off for fishing, weenching, or reading Van Es on the Pleistocene stratigraphy of Java. I didn't care, as long as they returned with a fresh point of view.

Things were hectic already, less than four months after we'd started. And we hadn't much to show, except a shift in the road-bed of the SF & D RR. The opposition, growing stronger each day, could sit back and rest the case, with nothing more than a smug, needling, I-told-you-so look.

The day finally came when we broke ground for the building. It was quite an achievement, and I invited the GG to dinner. I'd been drawn to the bunch of screwballs—the only name possible—more and more. Maybe because they were my brain-child, or maybe because lately they were the only human company in which I could relax.

The Hotel is about a half-mile south of Disneyland. I arrived early, hoping to grab a ginger ale. Our set designer, Frank—christened Francis—caught me at the door.

"Wanted to buy you a drink. This is the first time we've met socially."

That was true; it was equally

true something bothered her. Damn it! Trapped, I'd have to drink. We ordered, and I mulled it over. Waited, but she said nothing.

The drinks came. I shook several little, bright-yellow pills from the bottle, swallowed them, then drank. Frank cocked her head inquisitively.

"If you must know, they're for my ulcer."

"Didn't know you had one."

"Don't, but I'll probably get one, any day."

She laughed, and I drank again. I should do my drinking alone because I get boiled incredibly fast. It happened now. One second I was sober; the next, drunk.

Resting a cheek on a wobbly palm-and-elbow, I said, "Has everyone ever said you are the most beautiful—"

"Yes, but in your present state, it isn't a good idea for you to add to that number."

I shifted to the other forearm. "Frank, things might be different if I weren't a thin, sallow lecher."

"What a nice compliment—"

"Uh huh."

"Especially since I work for you, nominally anyway—"

"Uh huh, nominally."

"Bosses should not make passes

At gals who work as lower classes."

"Uh, huh, familiar."

"But you are, and getting more so daily—"

"Uh hu—are what?" I asked in surprise.

"Thin, tired: the GG has decided you're working too hard."

"Because I don't use Vano." I grinned, having waited long to put that one across.

"Be serious and listen—"

"You listen: if I'm working too hard, it's to finish. I *must*, and soon."

"This compulsion," she paced her words, "will kill you if you let it."

"It'll kill me if I don't let it—"

"Here comes Harry."

It was time. Blearily, I fumbled with the pills, spilled the bottle. Frank helped me gather them up, as Harry arrived.

He said, a look of worry on his gaunt, gray features, "The rest of us are waiting."

Concerned, Frank asked, "Think you're able?"

"Anytime you say," I answered, in a cold-sober monotone.

She flushed, knowing I was sober, not knowing certainly if I were serious.

When we were seated, I said enthusiastically, "Chateaubriand tonight, gangsters."

The GG did not react as expected.

Dex, the electronics engineer, said quietly, "If it's steak when the ground is broken, what'll it be when the thing is finished?"

"A feast, for all the animals in the world—just like Suleiman-bin-Daoud." This, from the GG writer, Mel.

Their faces showed the same thing that bothered Frank.

Harry said, "We have something to do."

"Well, do it!" I tried weak joviality: "It can't be anything of earth-shaking gravity."

Hazel, long since accepted as a GG member, replied, "It's just that we're . . . resigned."

"What?"

"We've produced nothing in months of sustained effort. That's why we're resigning," Dex replied disgustedly.

Frank touched my arm, said softly, "We've examined every angle. With the money available, it's just impossible to give a sensation of changed weight. And we know they've been pressuring you about us being on the payroll."

"Wait"—desperately—"if you pull out, everything will go. The opposition needs only something like this. Besides, the GG is the one bit of insanity I can depend on in a practical world, the prop for my judgment—"

Harry: "Clouded judgment."

Mel: "Expensive prop."

Having grown used to their friendly insults, I sensed their resolution weakening, felt the pendulum swinging back.

The waitress interrupted with news of an urgent phone call. It was the worst possible time for me to leave. And the news I got threw me. Feeling the weight of the world, I returned.

"Can't be in two places at once," I said bitterly. "Go ahead without me; I'm leaving."

"Wait a few minutes," Mel said, between bites of steak, "we want to resign. Sit down."

"Damn it, I can't! I spoke to The Boss. I've pulled a boo-boo, but big."

"What happened?"

"Bonestell will do the back-grounds, but he has to know what rocks we're putting in the rooms. What rocks are we? Anybody have an idea what the surface of Mars looks like? God, how could I have missed that?"

"Sit down," Dex said casually, "we want to resign."

Hazel added, "You can have your rocks in 24 hours. We worked it out weeks ago. I *did* read Van Es, and Harry has prospected, and Dex knows minerals, and Mel pushed his way through Tyrrell's 'Principles of Petrology'"—

"The science of rocks," Mel interrupted, between bites of steak.

"We got interested one day." Frank's pretty, dark eyes danced.

"We want to resign," Dex repeated casually, "so sit down."

I sat.

They began throwing the ball faster than I could catch: "No atmosphere on Mercury, then no oxidation; I insist there'd be no straight metals . . . The asteroids? Ferromagnesian blocks of some kind—any basalts around here? . . . For Venus, grab a truckload of granodiorite—the spotted stuff—from the Sierra-Nevadas and tint it pink . . . Lateritic soils for Mars? You

crazy? Must have water and a subtropical climate . . ."

It hit me: a valid use for the GG, one that already saved money. Make them a brain team, trouble-shooters, or problem-solvers on questions that could not be solved.

I said, "Fine, go ahead. About your resignations—"

Mel said something indistinguishable—I'd caught him *on* a bite of steak.

Hazel, belligerent, demanded: "Are you asking *us* to resign?"

Apparently I wasn't. So they stuck, and another crisis was met. Unfortunately, by then, I'd forgotten the shock and warning I got from the cat.

Things moved swiftly, more easily. The GG took over, becoming, in effect, my staff. They'd become more: five different extensions of me, each capable of acting correctly. As a team, they meshed beautifully.

Too beautifully, at one point. Dex and Hazel were seeing eye-to-eye, even in the dark, and I worried about the effect on the others. I might as well have worried about the effect of a light bulb on the sun. They married or some such, refused time off, and the GG functioned, if anything, better. It was almost indecent the way the five got along together.

A new problem arose: temperature. We weren't reproducing actual temperatures, but the rooms needed a marked change, for reality's sake. I'd insisted

on that, and having won the point, was stuck with it. It was after 2 A.M.; I was alone in the office.

The sound of the outer door closing startled me. Footsteps approached; I hurried to clean my desk, sweeping the bottle into the drawer.

"You're up too late. Go home." Frank had a nonarguable look in her eye. "You're supposed to be getting sleep."

"I am, far more than before you guys began helping, but—"

"But with all that extra sleep, you're looking worse."

"I don't *need* any more sleep!" I said angrily, then tried diversion, "Been on a date?"

"Yes, but I thought I'd better check on you." She moved close to the desk, and I remembered the last time we'd been alone, in the bar. Now I was glad I wasn't drunk.

"What the devil are you up to?"

She pawed through the desk drawers. "Finding what you tried to hide—"

"Wait, Frank!" I yelled, too late.

"She looked at the bottle, then me, with a strange expression: a little pity—not patronizing—but mostly feminine understanding. "Soda pop? Of course. You don't like alcohol, do you?"

"No." Gruffly.

Her eyes blinked rapidly, as though holding back tears. "I know what's the matter with you; I *really* know."

"There's nothing the matter with me that—"

"That beating this mess won't solve." We hadn't heard Mel enter. He leaned casually against the door. "Terrific idea for a story."

I shrugged. "Seems to be homecoming night."

"Not quite," he glanced at his watch, "but wait another few minutes."

He was right: Harry, out of breath, was the last of the GG to arrive.

"Now what?" I asked. "Surely this meeting isn't an accident?"

Dex said thoughtfully, "No, not really, but it is in the sense you mean. We didn't agree to appear tonight. Yet logically, it's time for the temperature problem—well, I guess each of us came down to help."

What could I do? That was the GG, characteristically, so we talked temperatures.

"What I was thinking," Harry began slowly, "was a sort of superthermostat." Harry, as usual, came to the right starting point.

Frank smiled, "That's right, especially considering layout. Venus and Mercury are hot; the others, cold. What about a control console that'll light when the rooms get outside normal temperature range? Then the operator—"

"Hey! Why an operator?" Mel questioned. "We ought to make this automatic." He grinned. "Giant computer . . . can

see it now: the brain comes alive, tries to destroy anyone turning it off—"

I asked: "Have you been reading the stuff you write?" Funny enough for 3 A.M.

Dex said calmly, "We can work this—in fact, we can tie it in pink ribbons and forget it. An electronics outfit in Pasadena makes an automatic scanning and logging system. Works off punched-paper tape. We'll code the right poop, and the system will compare it with the actual raw data. Feedback will be to a master control servo that'll activate the heater or cooler. Now, we need the right pickup—"

I snapped my fingers. "Variable resistor bridge. Couple of resistors equal at the right temperature. There'll be a frequency change with changing temperature—better than a thermocouple, I think."

They looked at me as though I were butting in.

"You've been reading, too," Dex accused. "Ok, we'll use a temperature bulb. Trouble is, with this system, we'd better let it run continuously. That'll drive costs up."

Hazel asked, "Can't we use the heat, maybe to drive a compressor? The sudden expansion of air could cool the rest. Harry?"

Harry hadn't time to answer. "What'll this cost?" I snapped.

"Roughly, 15 to 18 thousand," Dex replied.

"What?"

With fine impartiality, they ignored me completely. Harry continued, as though without interruption, "Ye-es, I guess a compressor-and-coolant system could be arranged . . ."

We broke up at 6 A.M. I took one of my pills, frowning at the bottle. Seemed to be emptying fast. Sleepily, I shook the thought off and faced the new day—little knowing the opposition had managed to skizzle us again.

The last displays were moons of Jupiter and Saturn; it was impossible to recreate tortured conditions of the planets themselves. Saturn's closest moon, Mimas, was picked.

Our grand finale; landing on Mimas with Saturn rising spectacularly out of the east. Mimas is in the plane of the rings, so they couldn't be obvious. We'd show enough, however, to make it damned impressive, and explain it by libration of the satellite.

The mechanics of realistically moving Saturn was rougher than a cob. And that's where the opposition fixed us. They claimed there wasn't enough drama in the tour. Let it end with a flash of light, a roar, and a meteor striking nearby.

The roar came from us. Mimas had no atmosphere—how could the meteor sound off or burn up? We finally compromised, permitting the meteor to hit.

We'd decided early the cus-

tomers couldn't walk through. Mel first, Harry, then Dex, together produced an electric-powered, open runabout. The cart ran on treads in contact with skillfully hidden tracks, for the current channel. A futuristic touch, that—we'd say the cart ran on broadcast power.

The power source provided cart headlights, and made batteries unnecessary for the guide's walkie-talkie and the customers' helmet receivers.

Mimas' last section of track was on a vibrating platform. The cart tripped a switch; when the meteor supposedly hit, the platform would drop and rise three inches, fast, twisting while it did—"enough," Mel said grimly, "to shake the damned *kishkas* out of 'em!"

We cracked that one, just in time for another. It began with Venus, as most of my problems had. We planned constant dust storms for Venus. Real quick, there'd be nothing left of the Bonestell's backgrounds but a blank wall, from mechanical erosion.

And how did we intend—?

Glass—

Too easily scratched. Lord, another one: how will the half-a-buck customers be able to see inside?

Glass and one of those silicon plastics?

Better, but—

Harry beat it: glass, plastic, and a boundary layer of cold air, jetted down from the ceiling, in front of the background paint-

ing and back of the look-in window. I was glad, for lately, Harry had begun to age. Thin and gray, he showed the strain—as did all of us.

We were sitting in an administration office at the park. I now recognized the symptoms; when the GG had no real problems, its collective mind usually turned to my health. I wouldn't admit it, but I felt a little peaked. Little? Hell, bone-tired, dog-weary pooped. Seemed every motion was effort, but soon it would end.

The phone rang. With the message, it *was* ended.

"Let's go, grouseketeers."

There was almost a pregnant pause. Six months: conception of the idea to delivery of finished product; six months, working together, fighting men, nature, and the perversity of inanimate objects—all of this now was done.

No one moved; Frank verbalized it: "I'm scared." She sounded scared.

"Better than being petrified, which I am," I answered. "But we might as well face it."

We dragged over to the TS building, an impressive structure.

The guide played it straight, told us exactly how to suit up. Then, in the cart, we edged into the tunnel that was the first lock, and—warned to set our filters—emerged onto the blinding surface of Mercury.

We felt the heat momentarily

—Mercury and Venus were kept at a constant 140 F, the others at 0 F—but it was a deliberate thrill. Then cool air from the cart suit-connections began circulating.

Bonestell was magnificent, as always. Yellow landscape, spatter cones, glittering streaks that might be metal in the volcanic ground — created by dusting ground mica on wet glue to catch the reflection of the sun. It was a masterpiece.

The sun. Black sky holding a giant, blazing ball. Too damned yellow, but filtered carbon arcs were the best we could do.

Down, into the tunnel that was lock two. This next one . . . Venus, obvious opposition point of attack, where we'd had the most trouble: Venus *had* to be right.

It was! A blast of wind struck us, and dust, swirling everywhere. We'd discovered there's no such thing as a sand storm—it's really dust—so we'd taken pains making things look right. Sand dunes were carefully cemented in place; dust rippling over gave the proper illusion.

Oddly shaped rocks, dimly seen, strengthened the impression of wind-abraded topography. Rocks were reddish, overlain by smears of bright yellow. Lot of trouble placing all that flowers of sulfur, but we postulated a liquid sulfur-sulfur dioxide-carbon dioxide cycle.

Overhead, a diffused, intense yellow light. The sun—we were on the daylight side.

I sighed, relaxed, knowing this one had worked out.

We gave the moon little time. For those who had become homesick, Earth was hanging magnificently in the sky. At a crater wall, we stopped, ostensibly to let souvenir hunters pick at small pieces of lunar rock without leaving the cart.

We'd argued hours on what type to use, till Mel dragged out his rock book. Mest, automatically, had wanted basalt. However, the moon's density being low, heavier rocks are probably scarce—one good reason not to expect radioactive ores there. We finally settled for rhyolite and obsidian.

Stopping on the moon had another purpose. We kept the room temperature at 70 F, for heating and cooling economy; the transition from Venus to Mars was much simpler if ambient temperature dropped from 140 to 70 and from 70 to 0, rather than straight through the range.

Next, a Martian polar cap, and we looked down a long canal that disappeared on the horizon. Water appeared to run uphill for that effect. The whole scene looked like an Arizona highway at dusk—what it should have. To our right, a suggestion of—damn the opposition's eyes—culture: a large stone whatzi† It was a jarring note.

We selected one of those nondescript asteroids with just enough diameter to show extreme curvature. Frank had

done magnificently. I found myself hanging onto the cart. Headlights deliberately dimmed, on the rocky surface, the cart bumped wildly. The sky was black, broken only by little, hard chunks of light. No horizon. The feeling of being ready to drop was intense, possibly too much so.

Europa, then, in a valley of ice. We'd picked Jupiter's third moon because its frozen atmosphere permitted some eerie pseudo-ice sculpturing. As we moved, Jupiter appeared between breaks and peaks in the sheer wall. Worked nicely, seeing the monstrous planet distended overhead, like a gaily colored beach ball moving with us, as the moon from a train window. Unfortunately, the ice forms detracted somewhat.

Mimas, pitch black, then a glow. Stark landscape quickly becoming visible. Steep cliffs, rocky plain. Saturn rising. The rings, their shadow on the globe, the beauty of it, made me sit stunned, though I knew what to expect.

The guide warned us radar spotted an approaching object, probably a meteor. We ran, the cart at maximum speed—not much, really. It tore at you, wanting to stare at Saturn, wanting to duck.

Hit the special section, dropped and rose our three inches—one hell of a distance—and the tour was over. I kept thinking, insanely, that the meteor *was* a perfect conflict touch.

We unsuited silently. Finally, Hazel breathed, "Hallelujah!" It was summation of success. There now remained but one thing: wait for the quarry to show.

I estimated the necessary time at four days and nights after opening. It was hard to wait, hard not to fidget under the watchful—the only word—eyes of the GG. They were up to something, undoubtedly. But there was something far more important: I'd narrowed the 2,499,999,999 down to five.

The one I sought was a member of the GG.

Opening night brought Harry and Frank to my office. They tried to be casual, engaged me in desultory nothings. Frank looked reproachful—I was there too late.

The following night, Mel ambled in at midnight. He grinned, discussed a plot, suggested we go out for a beer, changed his mind, left.

The third night, I waited in the dark. Nor was I disappointed: Dex and Hazel showed.

"What do you want? It's 2 A.M.!"

There was a long regrouping pause; then Hazel said, "Dex has a fine idea."

"Well?"

"I've been thinking about gravity—"

"About time," I said sarcastically, disliking myself but hoping it would get rid of them, "we opened three days ago."

He ignored my petulance and

grinned. "No, I meant anti-gravity. I think it's possible. If you had a superconductor in an inductance field—"

"Why tell me?"

"Thought you'd have some ideas."

I shook my head. "That's what I hired *you* for. My only idea right now is going to sleep."

Bewildered, they left.

And on the fourth night, no one came. So I headed for the Tour. Now, having risked everything on my logic, I was a dead pigeon if wrong. There were only minutes left.

I eased through the back door, heard our automation equipment humming. Despite darkness, I shortcutted, nearly reaching the door to the service hallway in back of the planetary rooms. There was a distinct click, and a flashlight blinded me. I waited, stifling a cry, knowing if it were he, death was next.

Death never spoke in such quiet, sweet tones. Frank asked, "What are you doing here?"

Frank, Frank, not you!

Surprise shocked me: the light, her voice, the sudden suspicion. Still, diversion and counterattack . . . "Perhaps you've been explaining to do," I said nastily. "Why are you here?"

Her wide-eyed ingenuousness making me more suspicious, she answered, "Waiting to see if you'd appear." Then she stopped being truthful: "You forget we had a date—"

"We didn't have any damned

date," I said flatly, hurting deep within.

"All right, I want to know why you're still driving yourself. It isn't work; that's finished."

The way she talked made me hopeful. Maybe she wasn't the one . . . and then came fear. Frank, if he's here, you're in danger. The monster respects nothing we hold dear—law, property, dignity, life.

There was one way to find out: make her leave. I wrenched the flashlight from her, smashed it on the concrete floor. "I mean this: get the hell out of here, and stay out!"

She said, distastefully, "I've seen it happen, but never this fast. You've gone Hollywood, you're a genius, you're tremendous—forgetting other people who helped. Go ahead with your mysterious deal—and I hope we never meet again."

I struggled with ambivalence. This might be a trick; if not, Frank now hated me irreparably.

No time to worry about human emotions, not any more. Nausea reminded me of the primary purpose. I continued down the dark hallway, listening for Frank's return, hoping she needn't die.

Light was unnecessary: I knew the right door. Because it started here, it would end here. Quickly, silently, I slipped inside the Venus room. With peculiar relief, I realized Frank wasn't

it: my nose led me right to the monster.

In an ecstatic, semistuporous state, smelling strongly of sulfur dioxide, he couldn't have been aware of me. Couldn't?

"It took you long enough." He didn't bother to turn from the rock he was huddled against.

"I had to be sure." I felt anything but the calm carried in my voice. "No wonder the GG got the right answers, with you making initial starts. Say, were you responsible for the cat that rolled at me?"

"An accident. Obviously, I wanted this room built as much as you." Harry, now undisguised, languorously turned. "Your little trap didn't quite come off—a danger in fighting a superior intellect."

"No trap. I had a job to do; it's done."

"Job? Job?" Infuriated, leaping to his feet, he shouted, "Speak the native tongue, filth!"

"What's the use? Because of you, I'll never again have the chance. And you no longer have a native tongue."

"Who were those judges," he asked bitterly, "to declare *me* an outcast?"

"Representatives of an outraged society." I almost lost my temper, thinking of this deviant's crimes. "You were lucky to get banishment instead of death."

He grinned. "So were you."

"True. I tried to find the proper place, where you'd have some chance."

He laughed openly. "I fixed the ship nicely."

"You don't understand at all—"

"I counted on your being a hero, trying to save us. So, I escaped."

"For three years only."

"What do you mean?"

"One of us won't leave here."

Harry frowned, then tried cunning. "Aren't you being silly? We are hopelessly marooned. Surely there are overriding considerations to your childish devotion to duty."

I shook my head. "This is too small a room for us. Even if I trusted you, I couldn't allow you at this naive young world."

Voices suddenly approached. "The GG?" Harry questioned.

"Didn't know they were coming." Desperately, I looked about, found an eroded mass. "Hide there; I'll get rid of them."

"You'd better—we have business." Possibly it was the only time I've agreed with him. Mel and Dex came in. I called, "Over here!"

Dex snapped his fingers. "*Knew* it was Venus."

Mel wrinkled his nose. "Sulfur dioxide, too, like we figured. Soda pop, when I broke into that tender scene between you and Frank—that gave you necessary carbon dioxide, right, am I not?"

"Yes . . . Why don't you guys leave me alone?" Beginning to falter in the heat, they dripped

perspiration. "You could die in this chilly climate."

Dex said, "Listen for a second. We don't have to break up. Let's form a service organization, 'Problems, Inc.' or some equally stupid title. Very soon we could afford a private bedroom, like this, for you to stay in all the time—"

"Need only two or three nights in ten." Harry was moving restlessly. He wouldn't wait much longer. "Combination of oxygen, carbon dioxide, and sulfur under relatively high temperature is how I eat. Pills can substitute, but not for protracted periods. That's why I had to build this room. Couple of weeks, and I'll be in the pink; as pink as you, anyway."

Abruptly, I lay down, ignoring them. I had to make my friends go. Harry could literally have shredded them. Footsteps: the door closed; relief and loneliness joined me, but only for a moment.

His voice sliced the darkness: "I'm a man of honor, and must warn you. If we fight, you'll lose. I escaped with far more pills than you; you're weaker."

I said sardonically, "With you stealing parts of my supply, that's probably the only truthful thing you've said!"

"I've been in here three nights, adjusting my metabolism . . ."

He came at me then, not breaking his flow of speech. At home, I'd have been surprised at the dishonor. Instead, I was ex-

pecting it. He ran into my ball-ed fist.

If we'd been home . . . if, if, if, if. At full strength, I could have broken his neck with the blow. Now, he simply rolled back and fell. Laughing, he attacked again. We were weak as babes, and fought like it. Clumsily, slowly, we went through the motions.

He'd been right—he was a little stronger, and the relative difference began to tell. Soon I was falling from his blows.

Hands on my neck, he kneed me hard in the stomach. Violently ill, I felt the sulfur dioxide rush from my lungs.

I remembered one trick they'd taught at school, and I used it. Unable to break his hold, I managed to get my hands around his throat. We locked, each silent.

Silent until I felt my last reserves going, until the crooning of the Song of Eternity began. This couldn't happen, not to this planet. With all my strength, I gave one last squeeze—but it failed. From somewhere, light-years of light-years away, I heard Frank, realized I'd played the fool: she'd been working for the monster.

A blinding flash inside my head—and the Last Darkness descended.

The light hadn't been inside my head: it flooded the room. Dimly, I was aware of the injection, and immediately felt better. Harry was gone.

The GG, minus one, was gathered around. Mel said, "It was a dilute solution of cerium nitrate. We figured the percentage on the basis of the pill Frank swiped. Hope you aren't poisoned."

"No." My voice was weak, "Need it. Oxidizing agent for the sulfur."

"Harry's dead," Hazel frowned. "When we came in, you'd broken his neck, were crooning to yourself."

So I had been crooning the Song of Eternity? "I'm a"—I felt silly—"a cop on a mission. I waited until whichever of you it was settled down here. That one had to be the criminal, to be done away with."

"Dex and I got rid of the body," Mel said. "No need to worry unless . . . unless you've read my stories. Perhaps *you* are the criminal. I'll be watching."

"No proof, of course . . . Do *you* believe I'm the criminal?"

Mel smiled. "No, but I'll watch anyway."

"More closely than tonight, I hope," Hazel said acidly. "If it hadn't been for her . . ."

I saw Frank, and was ashamed of my suspicions. She was silent, looking concerned. They all did, and I was warmed. Because, despite discomfort, they worried about me, an alien, a stranger. "Better leave. Heat's getting you."

Dex asked, "When are you going back?"

I shrugged. "Never. The ship is in the Gulf of California . . . Harry did that."

"What about our company? We can research anti-gravity. You might reach home yet."

I shook my head. "Said I was a policeman. I don't know very much—"

"Perfectly normal!" Mel said before Hazel shooshed him.

Dex was insistent: "Any cop knows at least something about his motorcycle. Was I right about the superconductor?"

"Yes. Now, get out of here, idiots, before there's no one left to form the company!"

Hazel, perspiring freely, red hair shimmering, kissed me. "We figured you out real, real early. We aren't ever wrong, and I'm glad we stayed with you, Mr. Venus." She laughed joyously, "First time I've ever kissed a Venusian!"

Frank, head close to mine, said softly, "I'm terribly sorry I said those things, but you had to believe I was angry, so I could call the others—"

"And I did everything possible to get you out . . ."

We were silent; then I said what I'd been fighting not to, for so long. "Frank . . . Francis?"

She understood, and stared horrified at me. I'd lost. Bowed my head, feeling like the damned fool I was.

She looked around the room. "It's so strange!"

"And with ingrained racial conditioning, you couldn't re-

spond to a thin, sallow alien."

"I don't know," she said hesitantly.

"I do!" Mel said. "The oldest story in science fiction; it's true; I can't write it."

"Why not?"

"No editor in right or wrong mind would buy the beautiful Earth damsel, after whom lusts the Monster from Venus—"

Frank snapped: "He isn't a monster! And his manners are better than many writers' I could name . . ."

Her voice trailed off with awareness of Mel's tiny smile—a smile that widened. He pulled her toward the door. "What a story! We'll hold the wedding in a Turkish Bath."

Alone, I sighed, comfortable again after three years. I was

grateful to the GG, and would do anything, within limits, for them. Yet, my newly adopted planet needed protection. Babes in the woods, they'd be torn to pieces outside.

Fortunately, the GG didn't know my meaning of "policeman," my home's highest order of intellect. I'd assure the group finally getting anti-gravity and use of planetary lines of force. But not the hyperspace drive, not for a good long while.

I certainly couldn't destroy the GG's confidence. I couldn't hurt them. They were so sure about me—so sure they were never wrong. How could I explain I'd been looking for a decent, habitable planet like Venus to discharge my captive, that I was from another galaxy?

THE END



"We'd better get those two out of here before we go broke!" 77

THE



The guardian struggled to immobilize the beast's gigantic talons

GALAXY PRIMES

By E. E. SMITH



as the frightened girl leaped to the safety of Garlock's arms.

They were four of the greatest minds in the Universe: Two men, two women, lost in an experimental space-ship billions of parsecs from home. And as they mentally charted the Cosmos to find their way back to earth, their own loves and hates were as startling as the worlds they encountered. Here is E. E. Smith's great new novel. . . .

THE GALAXY PRIMES

CHAPTER 1

HER hair was a brilliant green. So was her spectacularly filled halter. So were her tight short-shorts, her lipstick, and the lacquer on her finger- and toe-nails. As she strolled into the Main of the starship, followed hesitantly by the other girl, she drove a mental probe at the black-haired, powerfully-built man seated at the instrument-banked console.

Blocked.

Then at the other, slenderer man who was rising to his feet from the pilot's bucket seat. His guard was partially down; he was telepathing a pleasant, if somewhat reserved greeting to both newcomers.

She turned to her companion and spoke aloud. "So *these* are the system's best." The empha-

sis was somewhere between condescension and sneer. "Not much to choose between, I'd say . . . 'port me a tenth-piece, Clee? Heads, I take the tow-head."

She flipped the coin dexterously. "Heads it is, Lola, so I get Jim—James James James the Ninth himself. You have the honor of pairing with Clee—or should I say His Learnedness Right the Honorable Director Doctor Cleander Simmsworth Garlock, Doctor of Philosophy, Doctor of Science, Prime Operator, President and First Fellow of the Galaxian Society, First Fellow of the Gunther Society, Fellow of the Institute of Paraphysics, of the Institute of Nuclear Physics, of the College of Mathematics, of the Congress of Psionics, and of all the other top-bracket brain-gangs you ever heard of? Also, for your infor-

mation, his men have given him a couple of informal degrees—P.D.Q. and S.O.B.”

The big psionist's expression of saturnine, almost contemptuous amusement had not changed; his voice came flat and cold. “The less you say, Doctor Bellamy, the better. Obstinate, swell-headed women give me an acute rectal pain. Pitching your curves over all the vizzies in space got you aboard, but it won't get you a thing from here on. And for your information, Doctor Bellamy, one more crack like that and I take you over my knee and blister your fanny.”

“Try it, you big, clumsy, muscle-bound gorilla!” she jeered. “*That* I want to see! Any time you want to get both arms broken at the elbows, just try it!”

“Now's as good a time as any. I like your spirit, babe, but I can't say a thing for your judgment.” He got up and started purposefully toward her, but both non-combatants came between.

“Jet back, Clee!” James protested, both hands against the heavier man's chest. What the hell kind of show is *that* to put on?” And, simultaneously:

“Belle! Shame on you! Picking a fight already, and with nobody knows how many million people looking on! You know as well as I do that we may have to spend the rest of our lives together, so act like civilized beings—*please*—both of you! And don't . . .”

“Nobody's watching this but us,” Garlock interrupted. “When pussy there started using her claws I cut the gun.”

“That's what *you* think,” James said sharply, “but Fatso and his number one girl friend are coming in on the tight beam.”

“Oh?” Garlock whirled toward the hitherto dark and silent three-dimensional communications instrument. The face of a bossy-looking woman was already bright.

“Garlock! How *dare* you try to cut Chancellor Ferber off?” she demanded. Her voice was deep-pitched, blatant with authority. “Here you are, sir.”

The woman's face shifted to one side and a man's appeared—a face to justify in full the nickname “Fatso.”

“‘Fatso’, eh?” Chancellor Ferber snarled. Pale eyes glared from the fat face. “That costs you exactly one thousand credits, James.”

“How much will this cost me, Fatso?” Garlock asked.

“Five thousand—and, since nobody can call me that deliberately, demotion three grades and probation for three years. Make a note, Miss Foster.”

“Noted, sir.”

“Still sure we aren't going anywhere,” Garlock said. “*What* a brain!”

“Sure I'm sure!” Ferber gloated. “In a couple of hours I'm going to buy your precious starship in as junk. In the meantime, whether you like it or not,

I'm going to watch your expression while you push all those pretty buttons and nothing happens."

"The trouble with you, Fatso," Garlock said dispassionately, as he opened a drawer and took out a pair of cutting pliers, "is that all your strength is in your glands and none in your alleged brain. There are a lot of things—including a lot of tests—you know nothing about. How much will you see after I've cut one wire?"

"You wouldn't dare!" the fat man shouted. "I'd fire you—blacklist you all over the sys..."

Voice and images died away and Garlock turned to the two women in the Main. He began to smile, but his mental shield did not weaken.

"You've got a point there, Lola," he said, going on as though Ferber's interruption had not occurred. "Not that I blame either Belle or myself. If anything was ever calculated to drive a man nuts; this farce was. As the only female Prime in the system, Belle should have been in automatically—she had no competition. And to anybody with three brain cells working the other place lay between you, Lola, and the other three female Ops in the age group.

"But no. Ferber and the rest of the Board—stupidity *über alles!*—think all us Ops and Primes are psycho and that the ship will never even lift. So they made a Grand Circus of it. But they succeeded in one thing—

with such abysmal stupidity so rampant I'm getting more and more reconciled to the idea of our not getting back—at least, for a long, long time."

"Why, they said we had a very good chance . . ." Lola began.

"Yeah, and they said a lot of even bigger damn lies than that one. Have you read any of my papers?"

"I'm sorry. I'm not a mathematician."

"Our motion will be purely at random. If it isn't, I'll eat this whole ship. We won't get back until Jim and I work out something to steer us with. But they must be wondering no end, outside, what the score is, so I'm willing to call it a draw—temporarily—and let 'em in again. How about it, Belle?"

"A draw it is—temporarily." Neither, however, even offered to shake hands.

"Smile pretty, everybody," Garlock said, and pressed a stud.

". . . the matter? What's the matter? Oh . . . the worried voice of the System's ace newscaster came in. "Power failure *already?*"

"No," Garlock replied. "I figured we had a couple of minutes of privacy coming, if you can understand the meaning of the word. Now all four of us tell everybody who is watching or listening *au revoir* or good-bye, whichever it may turn out to be." He reached for the switch.

"Wait a minute!" the newscaster demanded. "Leave it on

until the last poss . . ." His voice broke off sharply.

"Turn it back on!" Belle ordered.

"Nix."

"Scared?" she sneered.

"You chirped it, bird-brain. I'm scared purple. So would you be, if you had three brain cells working in that glory-hound's head of yours. Get set, everybody, and we'll take off."

"Stop it, both of you!" Lola exclaimed. "Where do you want us to sit, and do we strap down?"

"You sit here; Belle at that plate beside Jim. Yes, strap down. There probably won't be any shock, and we should land right side up, but there's no sense in taking chances. Sure your stuff's all aboard?"

"Yes, it's in our rooms."

The four secured themselves; the two men checked, for the dozenth time, their instruments. The pilot donned his scanner. The ship lifted effortlessly, noiselessly. Through the atmosphere; through and far beyond the stratosphere. It stopped.

"Ready, Clee?" James licked his lips.

"As ready as I ever will be, I guess. Shoot!"

The pilot's right hand, forefinger outstretched, moved unenthusiastically toward a red button on his panel . . . slowed . . . stopped. He stared into his scanner at the Earth so far below.

"Hit it, Jim!" Garlock snapped. "*Hit it*, for goodness sake, before we *all* lose our nerve!"

James stabbed convulsively at the button, and in the very instant of contact—instantaneously; without a fractional microsecond of time-lapse—their familiar surroundings disappeared. Or, rather, and without any sensation of motion, of displacement, or of the passage of any time whatsoever, the planet beneath them was no longer their familiar Earth. The plates showed no familiar stars nor patterns of heavenly bodies. The brightly-shining sun was very evidently not their familiar Sol.

"Well—we went *somewhere* . . . but not to Alpha Centauri, not much to our surprise." James gulped twice; then went on, speaking almost jauntily now that the attempt had been made and had failed. "So now it's up to you, Clee, as Director of Project Gunther and captain of the good ship *Pleiades*, to boss the more-or-less simple—more, I hope—job of getting us back to Tellus."

Science, both physical and parapsychical, had done its best. Gunther's Theorems, which define the electromagnetic and electrogravitic parameters pertaining to the annihilation of distance, had been studied, tested, and applied to the full. So had the Psionic Corollaries; which, while not having the status of parapsychical laws, do allow computation of the qualities and magnitudes of the stresses required for any given application of the Gunther Effect.

The planning of the starship *Pleiades* had been difficult in the extreme; its construction almost impossible. While it was practically a foregone conclusion that any man of the requisite caliber would already be a member of the Galaxian Society, the three planets and eight satellites were screened, psionically by psionics, to select the two strongest and most versatile of their breed.

These two, Garlock and James, were heads of departments of, and under iron-clad contract to, vast Solar System Enterprises, Inc., the only concern able and willing to attempt the building of the first starship.

Alonzo P. Ferber, Chancellor of SSE, however, would not risk a tenth-piece of the company's money on such a bird-brained scheme. Himself a Gunther First, he believed implicitly that Firsts were in fact tops in Gunther ability; that these few self-styled "Operators" and "Prime Operators" were either charlatans or self-deluded crackpots. Since he could not feel that so-called "Operator Field," no such thing did or could exist. No Gunther starship could ever, possibly, work.

He did loan Garlock and James to the Galaxians, but that was as far as he would go. For salaries and for labor, for research and material, for trials and for errors; the Society paid and paid and paid.

Thus the starship *Pleiades* had cost the Galaxian Society almost a thousand million credits.

Garlock and James had worked on the ship since its inception. They were to be of the crew; for over a year it had been taken for granted that would be its only crew.

As the *Pleiades* neared completion, however, it became clearer and clearer that the displacement-control presented an unsolved, and quite possibly an insoluble, problem. It was mathematically certain that, when the Gunther field went on, the ship would be displaced instantaneously to some location in space having precisely the Gunther coordinates required by that particular field. One impeccably rigorous analysis showed that the ship would shift into the nearest solar system possessing an Earth-type planet; which was believed to be Alpha Centauri and which was close enough to Sol so that orientation would be automatic and the return to Earth a simple matter.

Since the Gunther Effect did in fact annihilate distance, however, another group of mathematicians, led by Garlock and James, proved with equal rigor that the point of destination was no more likely to be any one given Gunther point than any other one of the myriads of billions of equiguntherial points undoubtedly existent throughout the length, breadth, and thickness of our entire normal space-time continuum.

The two men would go anyway, of course. Carefully-calcu-

lated pressures would make them go. It was neither necessary nor desirable, however, for them to go alone.

Wherefore the planets and satellites were combed again; this time to select two women—the two most highly-gifted psionicists in the eighteen-to-twenty-five age group. Thus, if the *Pleiades* returned successfully to Earth, well and good. If she did not, the four selectees would found, upon some far-off world, a race much abler than the humanity of Earth; since eighty-three percent of Earth's dwellers had psionic grades lower than Four.

This search, with its attendant fanfare and studiously blatant publicity, was so planned and engineered that two selected women did not arrive at the spaceport until a bare fifteen minutes before the scheduled time of take-off. Thus it made no difference whether the women liked the men or not, or vice versa; or whether or not any of them really wanted to make the trip. Pressures were such that each of them had to go, whether he or she wanted to or not.

"Cut the rope, Jim, and let the old bucket drop," Garlock said. "Not too close. Before we make any kind of contact we'll have to do some organizing. These instruments," he waved at his console, "show that ours is the only Operator Field in this whole region of space. Hence, there are no Operators and no Primes.

That means that from now until we get back to Tellus . . ."

"If we get back to Tellus," Belle corrected, sweetly.

"Until we get back to Tellus there will be no Gunthering aboard this ship . . ."

"What?" Belle broke in again. "Have you lost your mind?"

"There will be little if any lepping, and nothing else at all. At the table, if we want sugar, we will reach for it or have it passed. We will pick up things, such as cigarettes, with our fingers. We will carry lighters and use them. When we go from place to place, we will walk. Is that clear?"

"You seem to be talking English," Belle sneered, "but the words don't make sense."

"I didn't think you were that stupid." Eyes locked and held. Then Garlock grinned savagely. "Okay. You tell her, Lola, in words of as few syllables as possible."

"Why, to get used to it, of course," Lola explained, while Belle glared at Garlock in frustrated anger. "So as not to reveal anything we don't have to."

"Thank you, Miss Montandon, you may go to the head of the class. All monosyllables except two. That should make it clear, even to Miss Bellamy."

"You . . . you *beast!*" Belle drove a tight-beamed thought. "I was never so insulted in my life!"

"You asked for it. Keep on asking for it and you'll keep on getting it." Then, aloud, to all

three, "In emergencies, of course, anything goes. We will now proceed with business." He paused, then went on, bitingly, "If possible."

"One minute, please!" Belle snapped. "Just why, Captain Garlock, are you insisting on oral communication, when lepping is so much faster and better? It's stupid—reactionary. Don't you ever lep?"

"With Jim, on business, yes; with women, no more than I have to. What I think is nobody's business but mine."

"What a way to run a ship! Or a project!"

"Running this project is my business, not yours; and if there's any one thing in the entire universe it does *not* need, it's a female exhibitionist. Besides your obvious qualifications to be one of the Eves in case of Ultimate Contingency . . ." he broke off and stared at her, his contemptuous gaze traveling slowly, dissectingly, from her toes to the topmost wave of her hair-do.

"Forty-two, twenty, forty?" he sneered.

"You flatter me." Her glare was an almost tangible force; her voice was controlled fury.

"Thirty-nine, twenty-two, thirty-five. Five seven. One thirty-five. If any of it's any of your business, which it isn't. You should be discussing brains and ability, not vital statistics."

"Brains? You? No, I'll take that back. As a Prime, you *have* got a brain—one that really

works. What do *you* think you're good for on this project? What can you do?"

"I can do anything any man ever born can do, and do it better!"

"Okay. Compute a Gunther field that will put us two hundred thousand feet directly above the peak of that mountain."

"That isn't fair—not that I expected fairness from you—and you know it. That doesn't take either brains or ability . . ."

"Oh, no?"

"No. Merely highly specialized training that you know I haven't had. Give me a five-tape course on it and I'll come closer than either you or James; for a hundred credits a shot."

"I'll do just that. Something you *are* supposed to know, then. How would you go about making first contact?"

"Well, I wouldn't do it the way *you* would—by knocking down the first native I saw, putting my foot on his face, and yelling 'Bow down, you stupid, ignorant beasts, and worship me, the Supreme God of the Macrocosmic Universe!'"

"Try again, Belle, that one missed me by . . ."

"Hold it, both of you!" James broke in. "What the hell are you trying to prove? How about cutting out this cat-and-dog act and getting some work done?"

"You've got a point there," Garlock admitted, holding his temper by a visible effort. "Sor-

ry, Jim. Belle, what were you briefed for?"

"To understudy you." She, too, fought her temper down. "To learn everything about Project Gunther. I have a whole box of tapes in my room, including advanced Gunther math and first-contact techniques. I'm to study them during all my on-watch time unless you assign other duties."

"No matter what your duties may be, you'll have to have time to study. If you don't find what you want in your own tapes—and you probably won't, since Ferber and his Miss Foster ran the selections—use our library. It's good—designed to carry on our civilization. Miss Montandon? No, that's silly, the way we're fixed. Lola?"

"I'm to learn how to be Doctor James' . . ."

"Jim, please, Lola," James said. "And call him Clee."

"I'd like that." She smiled winningly. "And my friends call me 'Brownie'."

"I see why they would. It fits like a coat of lacquer."

It did. Her hair was a dark, lustrous brown, as were her eyebrows. Her eyes were brown. Her skin, too—her dark red playsuit left little to the imagination—was a rich and even brown. Originally fairly dark, it had been tanned to a more-than-fashionable depth of color by naked sun-bathing and by practically-naked outdoor sports. A couple of inches shorter than the

green-haired girl, she too had a figure to make any sculptor drool.

"I'm to be Dr. Jim's assistant. I have a thousand tapes, more or less, to study, too. It'll be quite a while, I'm afraid, before I can be of much use, but I'll do the best I can."

"If we had hit Alpha Centauri that arrangement would have been good, but as we are, it isn't." Garlock frowned in thought, his heavy black eyebrows almost meeting above his finely-chiseled aquiline nose. "Since neither Jim nor I need an assistant any more than we need tails, it was designed to give you girls something to do. But out here, lost, there's work for a dozen trained specialists—and there are only four of us. So we shouldn't duplicate effort. Right? You first, Belle."

"Are you asking me or telling me?" she asked. "And that's a fair question. Don't read anything into it that isn't there. With your attitude, I want information."

"I am asking you," he replied, carefully. "For your information, when I know what should be done, I give orders. When I don't know, as now, I ask advice. If I like it, I follow it. Fair enough?"

"Fair enough. We're apt to need any number of specialists."

"Lola?"

"Of course we shouldn't duplicate. What shall I study?"

"That's what we must figure out. We can't do it exactly, of

course; all we can do now is to set up a rough scheme. Jim's job is the only one that's definite. He'll have to work full time on nebular configurations. If we hit inhabited planets he'll have to add their star-charts to his own. That leaves three of us to do all the other work of a survey. Ideally, we would cover all the factors that would be of use in getting us back to Tellus, but since we don't know what those factors are . . . Found out anything yet, Jim?"

"A little. Tellus-type planet, apparently strictly so. Oceans and continents. Lots of inhabitants—farms, villages, all sizes of cities. Not close enough to say definitely, but inhabitants seem to be humanoid, if not human."

"Hold her here. Besides astronomy, which is all yours, what do we need most?"

"We should have enough to classify planets and inhabitants, so as to chart a space-trend if there is any. I'd say the most important ones would be geology, stratigraphy, paleontology, oceanography, xenology, anthropology, ethnology, vertebrate biology, botany, and at least some ecology."

"That's about the list I was afraid of. But there are only three of us. The fields you mention number much more."

"Each of you will have to be a lot of specialists in one, then. I'd say the best split would be planetology, xenology, and anthropology—each, of course, stretched all out of shape to

cover dozens of related and non-related specialties."

"Good enough. Xenology, of course, is mine. Contacts, liaison, politics, correlation, and so on, as well as studying the non-human life forms—including as many lower animals and plants as possible. I'll make a stab at it. Now, Belle, since you're a Prime and Lola's an Operator, you get the next toughest job. Planetography."

"Why not?" Belle smiled and began to act as one of the party. "All I know about it is a hazy idea of what the word means, but I'll start studying as soon as we get squared away."

"Thanks. That leaves anthropology to you, Lola. Besides, that's your line, isn't it?"

"Yes. Sociological Anthropology. I have my M.S. in it, and am—was, I mean—working for my Ph.D. But as Jim said, it isn't only the one specialty. You want me, I take it, to cover humanoid races, too?"

"Check. You and Jim both, then, will know what you're doing, while Belle and I are trying to play ours by ear."

"Where do we draw the line between humanoid and non-human?"

"In case of doubt we'll confer. That covers it as much as we can, I think. Take us down, Jim—and be on your toes to take evasive action fast."

The ship dropped rapidly toward an airport just outside a fairly large city. Fifty thousand

—forty thousand—thirty thousand feet.

"Calling strange spaceship—you must be a spaceship, in spite of your tremendous, hitherto-considered-impossible mass—" a thought impinged on all four Tellurian minds, "do you read me?"

"I read you clearly. This is the Tellurian spaceship *Pleiades*, Captain Garlock commanding, asking permission to land and information as to landing conventions." He did not have to tell James to stop the ship; James had already done so.

"I was about to ask you to hold position; I thank you for having done so. Hold for inspection and type-test, please. We will not blast unless you fire first. A few minutes, please."

A group of twelve jet fighters took off practically vertically upward and climbed with fantastic speed. They leveled off a thousand feet below the *Pleiades* and made a flying circle. Up and into the ring thus formed there lumbered a large, clumsy-looking helicopter.

"We have no record of any planet named 'Tellus'; nor of any such ship as yours. Of such incredible mass and with no visible or detectable means of support or of propulsion. Not from this part of the galaxy, certainly . . . could it be that inter-galactic travel is actually possible? But excuse me, Captain Garlock, none of that is any of my business; which is to determine

whether or not you four Tellurian human beings are compatible with, and thus acceptable to, our humanity of Hodell . . . but you do not seem to have a standard televideo testing-box aboard."

"No, sir; only our own tridi and teevee."

"You must be examined by means of a standard box. I will rise to your level and teleport one across to you. It is self-powered and fully automatic."

"You needn't rise, sir. Just toss the box out of your 'copter into the air. We'll take it from there." Then, to James, "Take it, Jim."

"Oh? You can lift large masses against much gravity?" The alien was all attention. "I have not known that such power existed. I will observe with keen interest."

"I have it," James said. "Here it is."

"Thank you, sir," Garlock said to the alien. Then, to Lola: "You've been reading these—these Hodellians?"

"The officer in the helicopter and those in the fighters, yes. Most of them are Gunther Firsts."

"Good girl. The set's coming to life—watch it."

The likeness of the alien being became clear upon the alien screen; visible from the waist up. While humanoid, the creature was very far indeed from being human. He—at least, it had masculine rudimentary nipples—had double shoulders and four arms. His skin was a vivid-

ly intense cobalt blue. His ears were black, long, and highly dirigible. His eyes, a flaming red in color, were large and vertically-slitted, like a cat's. He had no hair at all. His nose was large and Roman; his jaw was square, almost jutting; his bright-yellow teeth were clean and sharp.

After a minute of study the alien said: "Although your vessel is so entirely alien that nothing even remotely like it is on record, you four are completely human and, if of compatible type, acceptable. Are there any other living beings aboard with you?"

"Excepting micro-organisms, none."

"Such life is of no importance. Approach, please, one of you, and grasp with a hand the projecting metal knob."

With a little trepidation, Garlock did so. He felt no unusual sensation at the contact.

"All four of you are compatible and we accept you. This finding is surprising in the extreme, as you are the first human beings of record who grade higher than what you call Gunther Two . . . or Gunther Second?"

"Either one; the terms are interchangeable."

"You have minds of tremendous development and power; definitely superior even to my own. However, there is no doubt that physically you are perfectly compatible with our humanity. Your blood will be of great bene-

fit to it. You may land. Good-bye."

"Wait, please. How about landing conventions? And visiting restrictions and so on? And may we keep this box? We will be glad to trade you something for it, if we have anything you would like to have?"

"Ah, I should have realized that your customs would be widely different from ours. Since you have been examined and accepted, there are no restrictions. You will not act against humanity's good. Land where you please, go where you please, do what you please as long as you please. Take up permanent residence or leave as soon as you please. Marry if you like, or simply breed—your unions with this planet's humanity will be fertile. Keep the box without payment. As Guardians of Humanity we Arpalones do whatever small favors we can. Have I made myself clear?"

"Abundantly so. Thank you, sir."

"Now I really must go. Good-bye."

Garlock glanced into his plate. The jets had disappeared, the helicopter was falling rapidly away. He wiped his brow.

"Well, I'll be damned," he said.

When his amazement subsided he turned to the business at hand. "Lola, do you check me that this planet is named Hodell, that it is populated by creatures exactly like us? Arpalones?"

"Exactly, except they aren't 'creatures'. They are humanoids, and very fine people."

"You'd think so, of course... correction accepted. Well, let's take advantage of their extraordinarily hospitable invitation and go down. Cut the rope, Jim."

The airport was very large, and was divided into several sections, each of which was equipped with runways and/or other landing facilities to suit one class of craft—propellor jobs, jets, or helicopters. There were even a few structures that looked like rocket pits.

"Where are you going to sit down, Jim? With the 'copters or over by the blast-pits?"

"With the 'copters, I think. Since I can place her to within a couple of inches, I'll put her squarely into that far corner, where she'll be out of everybody's way."

"No concrete out there," Garlock said. "But the ground seems good and solid."

"We'd better not land on concrete," James grinned. "Unless it's terrific stuff we'd smash it. On bare ground, the worst we can do is sink in a foot or so, and that won't hurt anything."

"Check. A few tons to the square foot, is all. Shall we strap down and hang onto our teeth?"

"Who do you think you're kidding, boss? Even though I've got to do this on manual, I won't tip over a half-piece standing on edge."

James stopped talking, pulled out his scanner, stuck his face into it. The immense starship settled downward toward the selected corner. There was no noise, no blast, no flame, no slightest visible or detectable sign of whatever force it was that was braking the thousands of tons of the vessel's mass in its miles-long, almost-vertical plunge to ground.

When the *Pleiades* struck ground the impact was scarcely to be felt. When she came to rest, after settling into the ground her allotted "foot or so," there was no jar at all.

"Atmosphere, temperature, and so on, approximately Earth-normal," Garlock said. "Just as our friend said it would be."

James scanned the city and the field. "Our visit is kicking up a lot of excitement. Shall we go out?"

"Not yet!" Belle exclaimed. "I want to see how the women are dressed, first."

"So do I," Lola added, "and some other things besides."

Both women—Lola through her Operator's scanner; Belle by manipulating the ship's tremendous Operator Field by the sheer power of her Prime Operator's mind—stared eagerly at the crowd of people now beginning to stream across the field.

"As an anthropologist," Lola announced, "I'm not only surprised. I am shocked, annoyed, and disgruntled. Why, they're *exactly* like white Tellurian human beings!"

"But look at their clothes!" Belle insisted. "They're wearing anything and everything, from bikinis to coveralls!"

"Yes, but notice." This was the anthropological scientist speaking now. "Breasts and loins, covered. Faces, uncovered. Heads and feet and hands, either bare or covered. Ditto for legs up to there, backs, arms, necks and shoulders down to here, and torsos clear down to there. We'll not violate any conventions by going out as we are. Not even you, Belle. You first, Chief. Yours the high honor of setting first foot—the biggest foot we've got, too—on alien soil."

"To hell with that. We'll go out together."

"Wait a minute," Lola went on. "There's a funny-looking automobile just coming through the gate. The Press. Three men and two women. Two cameras, one walkie-talkie, and two microphones. The photog in the purple shirt is really a sharpie at lepping. Class Three, at least—possibly a Two."

"How about screens down enough to lep, boss?" Belle suggested. "Faster. We may need it."

"Check. I'm too busy to record, anyway—I'll log this stuff up tonight," and thoughts flew.

"Check me, Jim," Garlock flashed. "Telepathy, very good. On Gunther, the guy was right—no signs at all of any First activity, and very few Seconds."

"Check," James agreed.

"And Lola, those 'Guardians' out there. I thought they were the same as the Arpalone we talked to. They aren't. Not even telepathic. Same color scheme, is all."

"Right. Much more brutish. Much flatter cranium. Long, tearing canine teeth. Carnivorous. I'll call them just 'guardians' until we find out what they really are."

The press car arrived and the Tellurians disembarked—and, accidentally or not, it was Belle's green slipper that first touched ground. There was a terrific babel of thought, worse, even, than voices in similar case, in being so much faster. The reporters, all of them, wanted to know everything at once. How, what, where, when, and why. Also who. And all about Tellus and the Tellurian solar system. How did the visitors like Hodel? And all about Belle's green hair. And the photographers were prodigal of film, shooting everything from all possible angles.

"Hold it!" Garlock loosed a blast of thought that "silenced" almost the whole field. "We will have order, please. Lola Montandon, our anthropologist, will take charge. Keep it orderly, Lola, if you have to throw half of them off the field. I'm going over to Administration and check in. One of you reporters can come with me, if you like."

The man in the purple shirt got his bid in first. As the two

men walked away together, Garlock noted that the man was in fact a Second—his flow of lucid, cogent thought did not interfere at all with the steady stream of speech going into his portable recorder. Garlock also noticed that in any group of more than a dozen people there was always at least one guardian. They paid no attention whatever to the people, who in turn ignored them completely. Garlock wondered briefly. Guardians? The Arpalones, out in space, yes. But these creatures, naked and unarmed on the ground? The Arpalones were non-human people. These things were—what?

At the door of the Field Office the reporter, after turning Garlock over to a startlingly beautiful, leggy, breasty, blonde receptionist-usherette, hurried away.

He flicked a feeler at her mind and stiffened. How could a Two—a high Two, at that—be working as an usher? And with her guard down clear to the floor? He probed—and saw.

"Lola!" He flashed a tight-beamed thought. "You aren't putting out anything about our sexual customs, family life, and so on."

"Of course not. We must know their mores first."

"Good girl. Keep your shield up."

"Oh, we're so glad to see you, Captain Garlock, sir!" The blonde, who was dressed little more heavily than the cigarette girls in Venusberg's Cartier

Room, seized his left hand in both of hers and held it considerably longer than was necessary. Her dazzling smile, her laughing eyes, her flashing white teeth, the many exposed inches of her skin, and her completely unshielded mind; all waved banners of welcome.

"Captain Garlock, sir, Governor Atterlin has been most anxious to see you ever since you were first detected. This way, please, sir." She turned, brushing her bare hip against his leg in the process, and led him by the hand along a hallway. Her thoughts flowed. "I have been, too, sir, and I'm simply delighted to see you close up, and I hope to see a lot more of you. You're a wonderfully pleasant surprise, sir; I've never seen a man like you before. I don't think Hodell ever saw a man like you before, sir. With such a really terrific mind and yet so big and strong and well-built and handsome and clean-looking and blackish. You're wonderful, Captain Garlock, sir. You'll be here a long time, I hope? Here we are, sir."

She opened a door, walked across the room, sat down in an overstuffed chair, and crossed her legs meticulously. Then, still smiling happily, she followed with eager eyes and mind Garlock's every move.

Garlock had been reading Governor Atterlin; knew why it was the governor who was in that office instead of the port manager. He knew that Atterlin had been reading him—as much

as he had allowed. They had already discussed many things, and were still discussing.

The room was much more like a library than an office. The governor, a middle-aged, red-headed man a trifle inclined to portliness, had been seated in a huge reclining chair facing a teevee screen, but got up to shake hands.

"Welcome, friend Captain Garlock. Now, to continue. As to exchange. Many ships visiting us have nothing we need or can use. For such, all services are free—or rather, are paid by the city. Our currency is based upon platinum, but gold, silver, and copper are valuable. Certain jewels, also . . ."

"That's far enough. We will pay our way—we have plenty of metal. What are your ratios of value for the four metals here on Hodel?"

"Today's quotations are . . ." He glanced at a screen, and his fingers flashed over the keys of a computer beside his chair. "One weight of platinum is equal in value to seven point three four six . . ."

"Decimals are not necessary, sir."

"Seven plus, then, weights of gold. One of gold to eleven of silver. One of silver to four of copper."

"Thank you. We'll use platinum. I'll bring some bullion tomorrow morning and exchange it for your currency. Shall I bring it here, or to a bank in the city?"

"Either. Or we can have an armored truck visit your ship."

"That would be better yet. Have them bring about five thousand tans. Thank you very much, Governor Atterlin, and good afternoon to you, sir."

"And good afternoon to you, sir. Until tomorrow, then."

Garlock turned to leave.

"Oh, may I go with you to your ship, sir, to take just a little look at it?" the girl asked, winningly.

"Of course, Grand Lady Neldine, I'd like to have your company."

She seized his elbow and hugged it quickly against her breast. Then, taking his hand, she walked—almost skipped—along beside him. "And I want to see Pilot James close up, too, sir—he's not nearly as wonderful as you are, sir—and I wonder why Planetographer Bellamy's hair is green? Very striking, of course, sir, but I don't think I'd care for it much on me—unless you'd think I should, sir?"

Belle knew, of course, that they were coming; and Garlock knew that Belle's hackles were very much on the rise. She could not read him, except very superficially, but she was reading the strange girl like a book and was not liking anything she read. Wherefore, when Garlock and his joyous companion reached the great spaceship—

"How come you picked up *that* little man-eating shark?" she

sent, venomously, on a tight band.

"It wasn't a case of picking her up." Garlock grinned. "I haven't been able to find any urbane way of scraping her off. First Contact, you know."

"She wants altogether too much Contact for a First—I'll scrape her off, even if she is one of the nobler class on this world . . ." Belle changed her tactics even before Garlock began his reprimand. "I shouldn't have said that, Clee, of course." She laughed lightly. "It was just the shock; there wasn't anything in any of my First Contact tapes covering what to do about beautiful and enticing girls who try to seduce our men. She doesn't know, though, of course, that she's supposed to be a bug-eyed monster and not human at all. Won't Xenology be in for a rough ride when we check in? Wow!"

"You can play *that* in spades, sister." And for the rest of the day Belle played flawlessly the role of perfect hostess.

It was full dark before the Hodellians could be persuaded to leave the *Pleiades* and the locks were closed.

"I have refused one hundred seventy-eight invitations," Lola reported then. "All of us, individually and collectively, have been invited to eat everything, everywhere in town. To see shows in a dozen different theaters and eighteen night spots. To dance all night in twenty-one

different places, ranging from dives to strictly soup-and-fish. I was nice about it, of course—just begged off because we were dead from our belts both ways from our long, hard trip. My thought, of course, is that we'd better eat our own food and take it slowly at first. Check, Clee?"

"On the beam, dead center. And you weren't lying much, either. I feel as though I'd done a day's work. After supper there's a thing I've got to discuss with all three of you."

Supper was soon over. Then:

"We've got to make a mighty important decision," Garlock began, abruptly. "Grand Lady Neldine—that title isn't exact, but close—wondered why I didn't respond at all, either way. However, she didn't make a point of it, and I let her wonder; but we'll have to decide by tomorrow morning what to do, and it'll have to be airtight. These Hodellians expect Jim and me to impregnate as many as possible of their highest-rated women before we leave. By their Code it's mandatory, since we can't hide the fact that we rate much higher than they do—their highest rating is only Grade Two by our standards—and all the planets hereabouts up-grade themselves with the highest-grade new blood they can find. Ordinarily, they'd expect you two girls to become pregnant by your choices of the top men of the planet; but they know you wouldn't breed down and don't expect you to. But how

in all hell can Jim and I refuse to breed them up without dealing out the deadliest insult they know?"

There was a minute of silence. "We can't," James said then. A grin began to spread over his face. "It might not be too bad an idea, at that, come to think of it. That ball of fire they picked out for you would be a blue-ribbon dish in anybody's cookbook. And Grand Lady Lemphi—" He kissed the tips of two fingers and waved them in the air. "Strictly Big League Material; in capital letters."

"Is that nice, you back-alley tomcat?" Belle asked, plaintively; then paused in thought and went on slowly, I won't pretend to like it, but I won't do any public screaming about it."

"Any anthropologist would say you'll have to," Lola declared without hesitation. "I don't like it, either. I think it's horrible; but it's excellent genetics and we cannot and must not violate systems-wide mores."

"You're all missing the point!" Garlock snapped. He got up, jammed his hands into his pockets, and began to pace the floor. "I didn't think any one of you was *that* stupid! If *that* was all there were to it we'd do it as a matter of course. But *think*, damn it! There's nothing higher than Gunther Two in the humanity of this planet. Telepathy is the only ESP they have. High Gunther uses hitherto unused portions of the brain. It's transmitted through genes, which are

dominant, cumulative, and self-multiplying by interaction. Jim and I carry more, stronger, and higher Gunther genes than any other two men known to live. Can we—*dare* we—plant such genes where none have ever been known before?"

Two full minutes of silence.

"That one has *really* got a bone in it," James said, unhelpfully.

Three minutes more of silence.

"It's up to you, Lola," Garlock said then. "It's your field."

"I was afraid of that. There's a way. Personally, I like it less even than the other, but it's the only one I've been able to think up. First, are you absolutely sure that our refusal—Belle's and mine, I mean—to breed down will be valid with them?"

"Positive."

"Then the whole society from which we come will have to be strictly monogamous, in the narrowest, most literal sense of the term. No exceptions whatever. Adultery, anything illicit, has always been not only unimaginable, but in fact impossible. We pair—or marry, or whatever they do here—once only. For life. Desire and potency can exist only within the pair; never outside it. Like eagles. If a man's wife dies, even, he loses all desire and all potency. That would make it physically impossible for you two to follow the Hodellian Code. You'd both be completely impotent with any

women whatever except your mates—Belle and me.”

“That will work,” Belle said. “*How* it will work!” She paused. Then, suddenly, she whistled; the loud, full-bodied, ear-piercing, tongue-and-teeth whistle which so few women ever master. Her eyes sparkled and she began to laugh with unrestrained glee. “But do you know what you’ve done, Lola?”

“Nothing, except to suggest a solution. What’s so funny about that?”

“You’re wonderful, Lola—simply priceless! You’ve created something brand-new to science—an impotent tomcat! And the more I think about it . . .” Belle was rocking back and forth with laughter. She could not possibly talk, but her thought flowed on, “I just love you all to pieces! An *impotent tomcat*, and he’ll *have* to stay true to me—Oh, this is simply *killing* me—I’ll *never* live through it!”

“It *does* put us on the spot—especially Jim,” came Garlock’s thought.

He, too, began to laugh; and Lola, as soon as she stopped thinking about the thing only as a problem in anthropology, joined in. James, however, did not think it was very funny.

“And that’s less than half of it!” Belle went on, still unable to talk. “Think of Clee, Lola. Six two—over two hundred—hard as nails—a perfect hunk of hard red meat—telling this whole damn cockeyed region of space

that he’s impotent, too! And with a perfectly straight face! And it ties in so *beautifully* with his making no response, yes or no, when she propositioned him. The poor, innocent, impotent lamb just simply didn’t have even the *faintest* inkling of what she meant! Oh, my . . .”

“Listen — *listen* — *listen!*” James managed finally to break in. “Not that I want to be promiscuous, but . . .”

“There, there, my precious little impotent tomeat,” Belle soothed him aloud, between giggles and snorts. “Us Earth-girls will take care of our lover-boys, see if we don’t. You won’t need any nasty little . . .” Belle could not hold the pose, but went off again into whoops of laughter. “*What* a brain you’ve got, Lola! I thought I could imagine *anything*, but to make these two guys of ours—the two absolute tops of the whole Solar System—it’s a stroke of genius . . .”

“Shut up, will you, you human hyena, and *listen!*” James roared aloud. “There ought to be *some* better way than that.”

“Better? Than sheer perfection?” Belle was still laughing but could now talk coherently.

“If you can think of another way, Jim, the meeting is still open.” Garlock was wiping his eyes. “But it’ll have to be a dilly. I’m not exactly enamored of Lola’s idea, either, but as the answer it’s one hundred percent to as many decimal places as you want to take time to write zeroes.”

There was more talk, but no improvement could be made up-on Lola's idea.

"Well, we've got until morning," Garlock said, finally. "If anybody comes up with anything by then, let me know. If not, it goes into effect the minute we open the locks. The meeting is adjourned."

Belle and James left the room; and, a few minutes later, Garlock went out. Lola followed him into his room and closed the door behind her. She sat down on the edge of a chair, lighted a cigarette, and began to smoke in short, nervous puffs. She opened her mouth to say something, but shut it without making a sound.

"You're afraid of me, Lola?" he asked, quietly.

"Oh, I don't . . . Well, that is . . ." She wouldn't lie, and she wouldn't admit the truth. "You see, I've never . . . I mean, I haven't had very much experience."

"You needn't be afraid of me at all. I'm not going to pair with you."

"You're not?" Her mouth dropped open and the cigarette fell out of it. She took a few seconds to recover it. "Why not? Don't you think I could do a good enough job?"

She stood up and stretched, to show her splendid figure to its best advantage.

Garlock laughed. "Nothing like that, Lola; you have plenty of sex appeal. It's just that I

don't like the conditions. I never have paired. I never have had much to do with women, and that little has been urbane, logical, and strictly *en passant*; on the level of mutual physical desire. Thus, I have never taken a virgin. Pairing with one is very definitely not my idea of urbanity and there's altogether too much obligation to suit me. For all of which good reasons I am not going to pair with you, now or ever."

"How do you know whether I'm a virgin or not? You've never read me that deep. Nobody can. Not even you, unless I let you."

"Reading isn't necessary—you flaunt it like a banner."

"I don't know what you mean . . . I certainly don't do it intentionally. But I ought to pair with you, Clee!" Lola had lost all of her nervousness, most of her fear. "It's part of the job I was chosen for. If I'd known, I'd've gone out and got some experience. Really I would have."

"I believe that. I think you would have been silly enough to have done just that. And you have a very high regard for your virginity, too, don't you?"

"Well, I . . . I used to. But we'd better go ahead with it. I've got to."

"No such thing. Permissible, but not obligatory."

"But it was assumed. As a matter of course. Anyway . . . well, when that girl started making passes at you, I thought you could have just as much fun, or

even more—she's charming; a real darling, isn't she?—without pairing with me, and then I had to open my big mouth and be the one to keep you from playing games with *anyone except* me, and I certainly am not going to let you suffer . . ."

"Bunk!" Garlock snorted. "Sheer flapdoodle! Pure psychological prop-wash, started and maintained by men who are either too weak to direct and control their drives or who haven't any real work to occupy their minds. It applies to many men, of course, possibly to most. It does not, however, apply to all, and, it lacks one whole hell of a lot of applying to me. Does that make you feel better?"

"Oh, it does . . . it does. Thanks, Clee. You know, I like you, a lot."

"Do you? Kiss me."

She did so.

"See?"

"You *tricked* me!"

"I did not. I want you to see the truth and face it. Your idealism is admirable, permanent, and shatter-proof; but your starry-eyed schoolgirl's mawkishness is none of the three. You'll have to grow up, some day. In my opinion, forcing yourself to give up one of your hardest-held ideals—virginity—merely because of the utter bilge that those idiot head-shrinkers stuffed you with, is sheer, plain idiocy. I suppose that makes you like me even less, but I'm laying it right on the line."

"No . . . more. I'll argue with you, when we have time, about some of your points, but the last one—if it's valid—has tremendous force. I didn't know men felt that way. But no matter what my feeling for you really is, I'm really grateful to you for the reprieve . . . and you know, Clee, I'm pretty sure you're going to get us back home. If anyone can, you can."

"I'm going to try to. Even if I can't, it will be Belle, not you, that I'll take for the long pull. And not because you'd rather have Jim—which you would, of course . . ."

"To be honest, I think I would."

"Certainly. He's your type. You're not mine; Belle is. Well, that buttons it up, Brownie, except for one thing. To Jim and Belle and everyone else, we're paired."

"Of course. Urbanity, as well as to present a united front to any and all worlds."

"Check. So watch your shield."

"I always do. That stuff is 'way, 'way down. I'm awfully glad you called me 'Brownie,' Clee. I didn't think you ever would."

"I didn't expect to—but I never talked to a woman this way before, either. Maybe it had a mellowing effect."

"You don't *need* mellowing—I do like you a lot, just exactly as you are."

"If true, I'm very glad of it. But don't strain yourself; and I

mean that literally, not as sarcasm."

"I know. I'm not straining a bit, and this'll prove it."

She kissed him again, and this time it was a production.

"That was an eminently convincing demonstration, Brownie, but don't do it too often."

"I won't." She laughed, gayly and happily. "If there's any next time, you'll have to kiss me first."

She paused and sobered. "But remember. If you should change your mind, any time you really want to . . . to kiss me, come right in. I won't be as silly and nervous and afraid as I was just now. That's a promise. Good night, Clee."

"Good night, Brownie."

CHAPTER 2

NEXT morning, Garlock was the last one, by a fraction of a minute, into the Main. "Good morning, all," he said, with a slight smile.

"Huh? How come?" James demanded, as all four started toward the dining nook.

Garlock's smile widened. "Lola. She brought me a pot of coffee and wouldn't let me out until I drank it."

"Brought?"

"Yeah. They haven't read their room-tapes yet, so they don't know that room-service is practically unlimited."

"Why didn't I think of that coffee business a couple of years ago?"

"Well, why didn't I think of it myself, ten years ago?"

Belle's eyes had been going from one man to the other. "Just *what* are you two talking about? If it's anybody's business except your own?"

"He is an early-morning grouch," James explained, as they sat down at the table. "Not fit to associate with man or beast—not even his own dog, if he had one—when he first gets up. How come you were smart enough to get the answer so quick, Brownie?"

"Oh, the pattern isn't too rare." She shrugged daintily, sweeping the compliment aside. "Especially among men on big jobs who work under tremendous pressure."

"Then how about Jim?" Belle asked.

"Clee's the Big Brain, not me," James said.

"You're a lot Bigger Brain than any of the men Lola's talking about," Belle insisted.

"That's true," Lola agreed, "but Jim probably is—must be—an icebox raider. Eats in the middle of the night. Clee probably doesn't. It's a good bet that he doesn't nibble between meals at all. Check, Clee?"

"Check. But what has an empty stomach got to do with the case?"

"Everything. Nobody knows how. Lots of theories—enzymes, blood sugar, endocrine balance, what have you—but no proof. It isn't always true. However, six or seven hours of empty

stomach, in a man who takes his job to bed with him, is very apt to uglify his pre-breakfast disposition."

Breakfast over and out in the Main:

"But when a man's disposition is ugly all the time, how can you tell the difference?" Belle asked, innocently.

"I'll let that pass," Garlock's smile disappeared, "because we've got work to do. Have any of you thought of any improvement on Lola's monogamous society?"

No one had. In fact—

"There may be a loop-hole in it," Lola said, thoughtfully. "Did any of you happen to notice whether they know anything about artificial insemination?"

"D'you think I'd stand for *that*?" Belle blazed, before Garlock could begin to search his mind. "I'd scratch anybody's eyes out—if you'd thought of that idea as a woman instead of as a near-Ph.D. in anthropology you'd've thrown it into the converter before it even hatched!"

"Invasion of privacy? That covers it, of course, but I didn't think it would bother you a bit." Lola paused, studying the other girl intently. "You're quite a problem yourself. Callous—utterly savage humor—yet very sensitive in some ways—fastidious . . ."

"I'm not on the table for dissection!" Belle snapped. "Study me all you please, but keep the notes in your notebook. I'd suggest you study Clee."

"Oh, I have been. He baffles me, too. I'm not very good yet, you . . ."

"That's the unders . . ."

"Cut it!" Garlock ordered, sharply. "I said we had work to do. Jim, you're hunting up the nearest observatory."

"How about transportation? No teleportation?"

"Out. Rent a car or hire a plane, or both. Fill your wallet—better have too much money than not enough. If you're too far away tonight to make it feasible to come back here, send me a flash. Brownie, you'll work this town first. Belle and I will have to work in the library for a while. We'll all want to compare notes tonight . . ."

"Yeah," James said into the pause, "I could tune in remote, but I don't know where I'll be, so it might not be so good."

"Check. You can 'port, but be *damn* sure nobody sees or senses you doing it. That buttons it up, I guess."

James and Lola left the ship; Garlock and Belle went into the library.

"If I didn't know you were impotent, Clee," Belle shivered affectedly and began to laugh, "I'd be scared to death to be alone with you in this great big spaceship. Lola hasn't realized yet what she really hatched out—the screamingest screamer ever pulled on anybody!"

"It isn't *that* funny. You have got a savage sense of humor."

"Perhaps." She shrugged her

shoulders. "But you were on the receiving end, which makes a big difference. She's a peculiar sort of duck. Brainy, but impersonal—academic. She knows all the words and all their meanings, all the questions and all the answers, but she doesn't apply any of them to herself. She's always the observer, never the participant. Pure egg-head . . . pure? *That's* it. She looks, acts, talks, and thinks like a *virgin* . . . Well, if that's all, she isn't any—or is she? Even though you've started calling her 'Brownie,' like my now-tamed tomcat, you might not . . ." She stared at him.

"Go ahead. Probe."

"Why waste energy trying to crack a Prime's shield? But just out of curiosity, are you two pairing, or not?"

"Tut-tut; don't be inurbane. Let's talk about Jim instead. I thought he'd be gibbering."

"No, I'm working under double wraps—full dampers. I don't want him in love with me. You want to know why?"

"I think I know why."

"Because having him mooning around underfoot would weaken the team and I want to get back to Tellus."

"I was wrong, then. I thought you were out after bigger game."

Belle's face went stiff and still. "What do you mean by that?"

"Plain enough, I would think. Wherever you are, you've got to be the Boss. You've never been

in any kind of a party for fifteen minutes without taking it over. When you snap the whip everybody jumps—or else—and you swing a wicked knife. For your information I don't jump, I am familiar with knives, and you will never run this project or any part of it."

Belle's face set; her eyes hardened. "While we're putting out information, take note that I'm just as good with actual knives as with figurative ones. If you're still thinking of blustering my fanny, don't try it. You'll find a rawhide haft sticking up out of one of those muscles you're so proud of—clear enough Mr. Garlock."

"Why don't you talk sense, instead of such yak-yak?"

"Huh?"

"I know you're a Prime, too, but don't let it go to your head. I've got more stuff than you have, so you can't Gunther me. You weigh one thirty-five to my two seventeen. I'm harder, stronger, and faster than you are. You're probably a bit limberer—not too much—but I've forgotten more judo than you ever will know. So what's the answer?"

Belle was breathing hard. "Then why don't you do it right now?"

"Several reasons. I couldn't brag much about licking anybody I outweigh by eighty-two pounds. I can't figure out your logic—if any—but I'm pretty sure now it wouldn't do either

of us any good. Just the opposite."

"From your standpoint, would that be bad?"

"What a *hell* of a logic! You have got the finest brain of any woman living. You're stronger than Jim is by a lot more than the Prime-to-Operator ratio—you've got more initiative, more drive, more guts. You know as well as I do what your brain may mean before we get back. Why in all hell don't you start *using* it?"

"You are complimenting *me*?"

"No. It's the truth, isn't it?"

"What difference does that make? Clee Garlock, I simply can't understand you at all."

"That makes it mutual. I can't understand a geometry in which the crookedest line between any two given points is the best line. Let's get to work, shall we?"

"Uh-huh, let's. One more bit of information, though, first. Any such idea as taking the Project away from you simply *never* entered my mind!" She gave him a warm and friendly smile as she walked over to the file-cabinets.

For hours, then, they worked; each scanning tape after tape. At mid-day they ate a light lunch. Shortly thereafter, Garlock put away his reader and all his loose tapes. "Are you getting anywhere, Belle? I'm not making any progress."

"Yes, but of course planets are probably pretty much the same everywhere—Tellus-type ones, I mean, of course. Is all the

Xenology as cockeyed as I'm afraid it must be?"

"Check. The one basic assumption was that there are no human beings other than Tellurians. From that they derive the secondary assumption that humanoid types will be scarce. From there they scatter out in all directions. So I'll have to roll my own. I've got to see Atterlin, anyway. I'll be back for supper. So long."

At the Port Office, Grand Lady Neldine met him even more enthusiastically than before; taking both his hands and pressing them against her firm, almost-bare breasts. She tried to hold back as Garlock led her along the corridor.

"I have an explanation, and in a sense an apology, for you, Grand Lady Neldine, and for you, Governor Atterlin," he thought carefully. "I would have explained yesterday, but I had no understanding of the situation here until our anthropologist, Lola Montandon, elucidated it very laboriously to me. She herself, a scientist highly trained in that specialty, could grasp it only by referring back to somewhat similar situations which may have existed in the remote past—so remote a past that the concept is known only to specialists and is more than half mythical, even to them."

He went on to give in detail the sexual customs, obligations, and limitations of Lola's purely imaginary civilization.

"Then it isn't that you don't want to, but you can't?" the lady asked, incredulously.

"Mentally, I can have no desire. Physically, the act is impossible," he assured her.

"What a shame!" Her thought was a peculiar mixture of disappointment and relief: disappointment in that she was not to bear this man's super-child; relief in that, after all, she had not personally failed—if she couldn't have this perfectly wonderful man herself, no other woman except his wife could ever have him, either. But what a shame to waste such a man as that on *any* one woman! It was really too bad.

"I see . . . I see—wonderful!" Atterlin's thought was not at all incredulous, but vastly awed. "It is of course logical that as the power of mind increases, physical matters become less and less important. But you will have much to give us; we may perhaps have some small things to give you. If we could visit your Tellus, perhaps . . . ?"

"That also is impossible. We four in the *Pleiades* are lost in space. This is the first planet we have visited on our first trial of a new method—new to us, at least—of interstellar travel. We missed our objective, probably by many millions of parsecs, and it is quite possible that we four will never be able to find our way back. We are trying now, by charting the galaxies throughout billions of cubic parsecs of space, to find merely the

direction in which our own galaxy lies."

"What a concept! What stupendous minds! But such immense distances, sir . . . what can you possibly be using for a space-drive?"

"None, as you understand the term. We travel by instantaneous translation, by means of something we call 'Gunther' . . . I am not at all sure that I can explain it to you satisfactorily, but I will try to do so, if you wish."

"Please do so, sir, by all means."

Garlock opened the highest Gunther cells of his mind. There was nothing as elementary as telepathy, teleportation, telekinesis, or the like; it was the pure, raw Gunther of the Gunther Drive, which even he himself made no pretense of understanding fully. He opened those cells and pushed that knowledge at the two Hodellian minds.

The result was just as instantaneous and just as catastrophic as Garlock had expected. Both blocks went up almost instantly.

"Oh, no!" Atterlin exclaimed, his face turning white.

The girl shrieked once, covered her face with her hands, and collapsed on the floor.

"Oh, I'm so sorry . . . excuse my ignorance, please! Garlock implored, as he picked the girl up, carried her across the room to a sofa, and assured himself that she had not been really hurt. She recovered quickly.

"I'm very sorry, Grand Lady Neldine and Governor Atterlin, but I didn't know . . . that is, I didn't realize . . ."

"You are trying to break it gently." Atterlin was both shocked and despondent. "This being the first planet you have visited, you simply did not realize how feeble our minds really are."

"Oh, not at all, really, sir and lady." Garlock began deftly to repair the morale he had shattered. "Merely younger. With your system of genetics, so much more logical and efficient than our strict monogamy, your race will undoubtedly make more progress in a few centuries than we made in many millennia. And in a few centuries more you will pass us—will master this only partially-known Gunther Drive."

"Esthetically, Lady Neldine, I would like very much to father you a child." He allowed his coldly unmoved gaze to survey her charms. "I am sorry indeed that it cannot be. I trust that you, Governor Atterlin, will be kind enough to spread word of our physical shortcomings, and so spare us further embarrassment?"

"Not shortcomings, sir, and, I truly hope, no embarrassment," Atterlin protested. "We are immensely glad to have seen you, since your very existence gives us so much hope for the future. I will spread word, and every Hodellian will do whatever he can to help you in your quest."

"Thank you, sir and lady," and Garlock took his leave.

"What an act, my male-looking but impotent darling!" came Belle's clear, incisive thought, bubbling with unrestrained merriment. "For our Doctor Garlock, the Prime Exponent and First Disciple of Truth, *what* an act! *Esthetically*, he'd like to father her a child, it says here in fine print—Boy, if she only knew! One tiny grain of truth and she'd chase you from here to Andromeda! Clee, I *swear* this thing is going to kill me yet!"

"Anything that would do that I'm very much in favor of!" Garlock growled the thought and snapped up his shield.

This one was, quite definitely, Belle's round.

Garlock took the Hodellian equivalent of a bus to the center of the city, then set out aimlessly to walk. The buildings and their arrangement, he noted—not much to his surprise now—were not too different from those of the cities of Earth.

With his guard down to about the sixth level, highly receptive but not at all selective, he strolled up one street and down another. He was not attentive to detail yet; he was trying to get the broad aspects, the "feel" of this hitherto unknown civilization.

The ether was practically saturated with thought. Apparently this was the afternoon rush hour, as the sidewalks were

crowded with people and the streets were full of cars. It did not seem as though anyone, whether in the buildings, on the sidewalks, or in the cars, was doing any blocking at all. If there were any such things as secrets on Hodell, they were scarce. Each person, man, woman, or child, went about his own business, radiating full blast. No one paid any attention to the thoughts of anyone else except in the case of couples or groups, the units of which were engaged in conversation. It reminded Garlock of a big Tellurian party when the punch-bowls were running low—everybody talking at the top of his voice and nobody listening.

This whole gale of thought was blowing over Garlock's receptors like a Great Plains wind over miles-wide fields of corn. He did not address anyone directly; no one addressed him. At first, quite a few young women, at sight of his unusual physique, had sent out tentative feelers of thought; and some men had wondered, in the same tentative and indirect fashion, who he was and where he came from. However, when the information he had given Atterlin spread throughout the city—and it did not take long—no one paid any more attention to him than they did to each other.

Probing into and through various buildings, he learned that groups of people were quitting work at intervals of about fifteen minutes. There were

thoughts of tidying up desks; of letting the rest of this junk go until tomorrow; of putting away and/or covering up office machines of various sorts. There were thoughts of powdering noses and of repairing make-up.

He pulled in his receptors and scanned the crowded ways for guardians—he'd have to call them that until either he or Lola found out their real name. Same as at the airport—the more people, the more guardians. What were they? How? And why?

He probed; carefully but thoroughly. When he had talked to the Arpalone he had read him easily enough, but here there was nothing whatever to read. The creature simply was not thinking at all. But that didn't make sense! Garlock tuned, first down, then up; and finally, at the very top of his range, he found something, but he did not at first know what it was. It seemed to be a mass-detector . . . no, two of them, paired and balanced. Oh, that was it! One tuned to humanity, one to the other guardians — balanced across a sort of bridge—that was how they kept the ratio so constant! But why? There seemed to be some wide-range receptors there, too, but nothing seemed to be coming in . . .

While he was still studying and still baffled, some kind of stimulus, which was so high and so faint and so alien that he could neither identify nor interpret it, touched the Arpa-

lone's far-flung receptors. Instantly the creature jumped, his powerful, widely-bowed legs sending him high above the heads of the crowd and, it seemed to Garlock, directly toward him. Simultaneously there was an insistent, low-pitched, whistling scream, somewhat like the noise made by an airplane in a no-power dive; and Garlock saw, out of the corner of one eye, a yellowish something flashing downward through the air.

At the same moment the woman immediately in front of Garlock stifled a scream and jumped backward, bumping into him and almost knocking him down. He staggered, caught his balance, and automatically put his arm around his assailant, to keep her from falling to the sidewalk.

In the meantime the guardian, having landed very close to the spot the woman had occupied a moment before, leaped again; this time vertically upward. The thing, whatever it was, was now braking frantically with wings, tail, and body; trying madly to get away. Too late. There was a bone-crushing impact as the two bodies came together in mid-air; a jarring thud as the two creatures, inextricably intertwined, struck the pavement as one.

The thing varied in color, Garlock now saw, shading from bright orange at the head to pale yellow at the tail. It had a savagely-tearing curved beak; tremendously powerful wings; its

short, thick legs ended in hawk-like talons.

The guardian's bowed legs had already immobilized the yellow wings by clamping them solidly against the yellow body. His two lower arms were holding the frightful talons out of action. His third hand gripped the orange throat, his fourth was exerting tremendous force against the jointure of neck and body. The neck, originally short, was beginning to stretch.

For several seconds Garlock had been half-conscious that his accidental companion was trying, with more and more energy, to disengage his encircling left arm from her waist. He wrenched his attention away from the spectacular fight—to which no one else, not even the near-victim, had paid the slightest attention—and now saw that he had his arm around the bare waist of a statuesque matron whose entire costume would have made perhaps half of a Tellurian sun-suit. He dropped his arm with a quick and abject apology.

"I should apologize to you instead, Captain Garlock," she thought, with a wide and friendly smile, "for knocking you down, and I thank you for catching me before I fell. I should not have been startled, of course. I would not have been, except that this is the first time that I, personally, have been attacked."

"But what are they?" Garlock blurted.

"I don't know." The woman

turned her head and glanced, in complete disinterest, at the two furiously - battling creatures. Garlock knew now that this was the first time, except for that instantly-dismissed thrill of surprise at being the actual target of an attack, that she had thought of either of them. "Orange-yellow? It could be a . . . a fumapty, perhaps, but I've no idea, really. You see, such things are none of our business."

She thought at him, a half-shrug, half-grimace of mild distaste—not at the personal contact with the man nor at the savage duel; but at even thinking of either the guardian or the yellow monster — and walked away into the crowd.

Garlock's attention flashed back to the fighters. The yellow thing's neck had been stretched to twice its natural length and the guardian had *eaten* almost through it. There was a terrific crunch, a couple of smacking, gobbling swallows, and head parted from body. The orange beak still clashed open and shut, however, and the body still thrashed violently.

Shifting his grips, the guardian proceeded to tear a hole into his victim's body, just below its breast-bone. Thrusting two arms into the opening, he yanked out two organs—one of which, Garlock thought, could have been the heart—and ate them both; if not with extreme gusto, at least in a workmanlike and thoroughly competent fashion. He then

picked up the head in one hand, grabbed the tip of a wing with another, and marched up the street for half a block, dragging the body behind him.

He lifted a manhole cover with his two unoccupied hands, dropped the remains down the hole thus exposed, and let the cover slam back into place. He then squatted down, licked himself meticulously clean with a long, black, extremely agile tongue, and went on about his enigmatic business quite as though nothing had happened.

Garlock strolled around a few minutes longer, but could not recapture any interest in the doings of the human beings around him. He had filed away every detail of what had just happened, and it had so many bizarre aspects that he could not think of anything else. Wherefore he flagged down a "taxi" and was taken out to the *Pleiades*. Belle and Lola were in the Main.

"I saw the *damndest* thing, Clee!" Lola exclaimed. "I've been gnawing my fingernails off up to the knuckles, waiting for you!"

Lola's experience had been very similar to Garlock's own, except in that her monster was an intense green in color and looked something like a bat about four feet long, with six-inch canine teeth and several stingers . . .

"Did you find out the name of the thing?" Garlock asked.

"No. I asked half-a-dozen peo-

ple, but nobody would even listen to me except one half-grown boy, and the best he could do was that it might be something he had heard another boy say somebody had told him might be a 'lemart.' And as to those lower-case Arpalones, the best I could dig out of anybody was just 'guardians.' Did you do any better?"

"No, I didn't do as well," and he told the girls about his own experience.

"But I didn't find any detectors or receptors, Clee," Lola frowned. "Where were they?"

"Way up—up here," he showed her. "I'll make a full tape tonight on everything I found out about the guardians and the Arpalones—besides my regular report, I mean—since they're yours, and you can make me one about your friend the green bat . . ."

"Hey, I *like* that!" Belle broke in. "That *could* be taken amiss, you know, by such a sensitive soul as I!"

"Check." Garlock chuckled. "I'll have to file that one, in case I want to use it sometime. How're you coming, Belle?"

"Nice!" Belle's voracious mind had been so busy absorbing new knowledge that she had temporarily forgotten about her fight with her captain. "I'm just about done here. I'll be ready tomorrow, I think, to visit their library and tape up some planetological and planetographical—notice how insouciantly I toss

off those two-credit words?—data on this here planet Hodell."

"Good going. You've been listening to this stuff Lola and I were chewing on—does any of it make sense to you?"

"It does not. I never heard anything to compare with it."

"Excuse me for changing the subject," Lola put in, plaintively, "but when, if ever, do we eat? Do we *have* to wait until that confounded James boy gets back from wherever it was he went?"

"If you're hungry, we'll eat now."

"*Hungry?* Look!" Lola turned herself sidewise, placed one hand in the small of her back, and pressed hard with the other her flat, taut belly. "See? Only a couple of inches from belt-buckle to backbone—dangerously close to the point of utter collapse."

"You poor, abused little thing!" Garlock laughed and all three crossed the room to the dining alcove. While they were still ordering, James appeared beside them.

"Find out anything?" Garlock asked.

"Yes and no. Yes, in that they have an excellent observatory, with a hundred-eighty-inch reflector, on a mountain only seventy-five miles from here. No, in that I didn't find any duplication of nebular configurations with the stuff I had with me. However, it was relatively coarse. Tomorrow I'll take a lot of fine stuff along. It'll take some time—a full day, at least."

"I expected that. Good going, Jim!"

All four ate heartily, and, after eating, they taped up the day's reports. Then, tired from their first real day's work in weeks, all went to their rooms.

A few minutes later, Garlock tapped lightly at Lola's door.

"Come in." She stiffened involuntarily, then relaxed and smiled. "Oh, yes, Clee; of course. You're . . ."

"No, I'm not. I've been doing a lot of thinking about you since last night, and I may have come up with an answer or two. Also, Belle knows we aren't pairing, and if we don't hide behind a screen at least once in a while, she'll know we aren't going to."

"Screen?"

"Screen. Didn't you know these four private rooms are solid? Haven't you read your house-tape yet?"

"No. But do you think Belle would actually peek?"

"Do you think she wouldn't?"

"Well, I don't like her very much, but I wouldn't think she would do anything like that, Clee. It isn't urbane."

"She isn't urbane, either, whenever she thinks it might be advantageous not to be."

"What a *terrible* thing to say!"

"Take it from me, if Belle Bellamy doesn't know everything that goes on it isn't from lack of trying. You wouldn't know about room service, either, then—better scan that tape be-

fore you go to sleep tonight—what'll you have in the line of a drink to while away enough time so she will know we've been playing games?"

"Ginger ale, please."

"I'll have ginger beer. You do it like so." He slid a panel aside, his fingers played briefly on a typewriter-like keyboard. Drinks and ice appeared. "Anything you want—details of the tape."

He lighted two cigarettes, handed her one, stirred his drink. "Now, fair lady—or should I say beauteous dark lady?—we will follow the precept of that immortal Chinese philosopher, Chin On."

"You *are* a Prime Operator, aren't you?" She laughed, but sobered quickly. "I'm worried. You said I flaunted virginity like a banner, and now Belle . . . What am I doing wrong?"

"There's a lot wrong. Not so much what you're doing as what you aren't doing. You're too aloof—detached—egg-headish. You know the score, words and music, but you don't sing. All you do is listen. Belle thinks you're not only a physical virgin, but a psychic-blocked prude. I know better. You're so full of conflict between what you want to do—what you know is right—and what those three-cell-brained nincompoops made you think you ought to do that you have got no more degrees of freedom than a piston-rod. You haven't been yourself for a minute since you came aboard. Check?"

"You *have* been thinking, haven't you? You may be right; except that it's been longer than that . . . ever since the first preliminaries, I think. But what can I *do* about it, Clee?"

"Contact. Three-quarters full, say; enough for me to give you what I think is the truth."

"But you said you *never* went screens down with a woman?"

"There's a first time for everything. Come in."

She did so, held contact for almost a minute, then pulled herself loose.

"Ug-gh-gh." She shivered. "I'm glad I haven't got a mind like that."

"And the same from me to you. Of course the real truth may lie somewhere in between. I may be as far off the beam on one side as you are on the other."

"I hope so. But it cleared-things up no end—it untied a million knots. Even that other thing—brotherly love? It's a very nice concept—you see, I never had any brothers."

"That's probably one thing that was the matter with you. Nothing warmer than that, certainly, and never will be."

"And I suppose you got the thought—it must have jumped up and smacked you—" Lola's hot blush was visible even through her heavy tan, "how many times I've felt like running my fingers up and down your ribs and grabbing a handful of those terrific muscles of

yours, just to see if they're as hard as they look?"

"I'm glad you brought that up; I don't know whether I would have dared to or not. You've got to stop acting like a Third instead of an Operator; and you've got to stop acting as though you had never been within ten feet of me. Now's as good a time as any." He took off his shirt and struck a strong-man's pose. "Come ahead."

"By golly, I'm *going* to!" Then, a moment later, "Why, they're even *harder*! How do you, a scientist, psionist, and scholar, keep in such hard shape as that?"

"An hour a day in the gym, three hundred sixty-five days a year. Many are better—but a hell of a lot are worse."

"I'll say." She finished her ginger ale, sat down in her chair, leaned back and put her legs up on the bed. "That was a relief of tension if there ever was one. I haven't felt so good since they picked me as hometown candidate—and that was a mighty small town and eight months ago. Bring on your dragons, Clee, and I'll slay 'em far and wide. But I can't actually *be* like she is . . ."

"Thank God for that. Deliver me from *two* such pretzel-benders aboard one ship."

". . . but I could have been a pretty good actress, I think."

"Correction, please. 'Outstanding' is the word."

"Thank you, kind sir. And women—men, too, of course—do

bring up certain memories, to . . . to . . ."

"To roll 'em around on their tongues and give their taste-buds a treat."

"Exactly. So where I don't have any appropriate actual memories to bring up, I'll make like an actress. Check?"

"Good girl! Now you're rolling—we're in like Flynn. Well, we've been in screen long enough, I guess. Fare thee well, little sister Brownie, until we meet again." He tossed the remains of their refreshments, trays and all, into the chute, picked up his shirt, and started out.

"Put it on, Clee!" she whispered, intensely.

"Why?" He grinned cheerfully. "It'd look still better if I peeled down to the altogether."

"You're incorrigible," she said, but her answering grin was wide and perfectly natural. "You know, if I had had a brother something like you it would have saved me a lot of wear and tear. I'll see you in the morning before breakfast."

And she did. They strolled together to breakfast; not holding hands, but with hip almost touching hip. Relaxed, friendly, on very cordial and satisfactory terms. Lola punched breakfast orders for them both. Belle drove a probe, which bounced—Lola's screen was tight, although her brown eyes were innocent and bland.

But during the meal, in re-

sponse to a double-edged, wickedly-barbed remark of Belle's, a memory flashed into being above Lola's shield. It was the veriest flash, instantly suppressed. Her eyes held clear and steady; if she blushed at all it did not show.

Belle caught it, of course, and winked triumphantly at Garlock. She knew, now, what she had wanted to know. And, Prime Operator though he was, it was all he could do to make no sign; for that fleetingly-revealed memory was a perfect job. He would not have—*could* not have—questioned it himself, except for one highly startling fact. It was of an event that had not happened and never would!

And after breakfast, at some distance from the others, "That is my girl, Brownie! You're firing on all forty barrels. You're an Operator, all right; and it takes a damn good one to lie like that with her mind!"

"Thanks to you, Clee. And thanks a million, really. I'm me again—I think."

Then, since Belle was looking, she took him by both ears, pulled his head down, and kissed him lightly on the lips. The spontaneity and tenderness were perfect at that moment. Clee's appreciation was obvious.

"I know I said you'd have to kiss me next time," Lola said, very low, "but this act needs just this much of an extra touch. Anyway, such little, tiny, sisterly ones as this, and out in public, don't count."

LOLA and Garlock went to town in the same taxi. As they were about to separate, Garlock said:

"I don't like those hell-divers, yellow, green, or any other color; and you, Brownie, are very definitely not expendable. Are you any good at mind-bombing?"

"Why, I never heard of such a thing."

"You isolate a little energy in the Op field, remembering of course, that you're handling a hundred thousand gunts. Transpose it into platinum or uranium—anything good and heavy. For one of these monsters you'd need two or three micrograms. For a battleship, up to maybe a gram or so. 'Port it to the exact place you want it to detonate. Reconvert and release instantaneously. One-hundred-percent-conversion atomic bomb, tailored exactly to fit the job. Very effective."

"It would be. My God, Clee, can you do that?"

"Sure—so can you. Any Operator can."

"Well, I *won't*. I *never* will. Besides, I'd probably kill too many people, besides the monster. No, I'll 'port back to the Main if anything attacks me. I'm chain lightning at that."

"Do that, then. And if anything very unusual happens give me a flash."

"I'll do that. 'Bye, Clee." She turned to the left. He walked

straight on, toward the business center, to resume his study at the point where he had left off the evening before.

For over an hour he wandered aimlessly about the city; receiving, classifying, and filing away information. He saw several duels between guardians and yellow and green-bat monsters, to none of which he paid any more attention than did the people around him. Then a third kind of enemy appeared—two of them at once, flying wing-and-wing—and Garlock stopped and watched.

Vivid, clear-cut stripes of red and black, even on the tremendously long, strong wings. Distinctly feline as to heads, teeth, and claws. While they did not at all closely resemble flying saber-toothed tigers, that was the first impression that leaped into Garlock's mind.

Two bow-legged guardians came leaping as usual, but one of them was a fraction of a second too late. That fraction was enough. While the first guardian was still high in air, grappling with one tiger, the other swung on a dime—the blast of air from his right wing blowing people in the crowd below thither and yon and knocking four of them flat—and took the guardian's head off his body with one savage swipe of a frightfully-armed paw. Disregarding the carcass both attackers whirled sharply at the second guardian, meeting him in such fashion that he could not come to firm grips with either of

them, and that battle was very brief indeed. More and more guardians were leaping in from all directions, however, and the two tigers were forced to the ground and slaughtered.

Since six guardians had been killed, eight guardians marched up the street, dragging grisly loads. Eight bodies, friend and foe alike, were dumped into a manhole; eight creatures squatted down and cleaned themselves meticulously before resuming their various patrols.

Ten or fifteen minutes later, Garlock felt Lola's half-excited, half-frightened thought. "Clee, do you read me?"

"Loud and clear."

"There's something coming that's certainly none of my business—maybe not even yours."

"Coming," and with the thought he was there. "Where?"

She pointed a thought, he followed it. Far away yet, but coming fast, was an immense flock of flying tigers!

Lola licked her lips. "I'm going home, if you don't mind."

"Beat it."

She disappeared.

"Jim!" Garlock thought. "Where are you?"

"Observatory. Need me?"

"Yes. Bombing. Two point four microgram loads. Focus spot on my right—teleport in."

"Coming in on your right."

"And I on your left!" Belle's thought drove in as he had never before felt it driven. Being a Prime, she did not need a focus

spot and appeared the veriest instant later than did James.

"Can you bomb?" Garlock snapped.

"What do *you* think?" she snapped back.

A moment of flashing thought and the three Tellurians disappeared, materializing five hundred feet in air, two hundred feet ahead of the van of that horrible flight of monsters, drifting before it.

Belle got in the first shot. Not only did the victim disappear—a couple of dozen around it were torn to fragments and the force of the blast staggered all three Tellurians.

"Damn it, Belle, cut down or get to hell out!" Garlock yelled. "I said two point four *micrograms*, not milligrams. Just kill 'em, don't scatter 'em all over hell's half acre—less mess to clean up and I *don't* want you to kill people down below. Especially I don't want you to kill us—not even yourself."

"'Scuse, please, I guess I was a bit enthusiastic in my weighing."

There began a series of muffled explosions along the front; each followed by the plunge of a tiger-striped body to the ground. Faster and faster the explosions came as the Operator and the Primes learned the routine and the rhythm of the job.

Nor were they long alone. The roaring, screaming howl of jets came up from behind them; four Arpalones appeared at their left, strung out along the front. Each

held an extraordinarily heavy-duty blaster in each of his four hands; sixteen terrific weapons were hurling death into the flying horde.

"Slide over, Terrestrials," came a calm thought. "You three take their left front, we'll take their right and center."

As they obeyed the instructions, "*They* don't give a damn where the pieces fly!" Belle protested. "Why should we be fussy about their street-cleaning department? *I'm* starting to use fives."

"Okay. We'll have to hit 'em harder, anyway, to keep up. Five or maybe six—just be damn sure not to knock us or the Arpalones out of the air."

Carnage went on. The battlefront, while inside the city limits, was now almost stationary.

"Ha! Help—I hear footsteps approaching on jet-back," Garlock announced. "Give 'em hell, boys—shovel on the coal!"

A flight of fighter-planes, eight abreast and wing-tips almost touching, howled close overhead and along the line of invasion. They could not fire, of course, until they reached the city limits. There they opened up as one, and the air below became literally filled with falling monsters. Some had only broken wings; some were dead, but more or less whole; many were blown to unrecognizable bits and scraps of flesh.

Another flight screamed into place immediately behind the

first; then another and another and another until six flights had passed. Then came four helicopters, darting and hovering, whose gunners picked off individually whatever survivors had managed to escape all six waves of fighters.

"That's better," came a thought from the Arpalone nearest Garlock. "Situation under control, thanks to you Tellurians. Supposed to be two squads of us gunners, but the other squad was busy on another job. Without you, this could have developed into a fairly nasty little infection. I don't know what you're doing or how you're doing it—we were told that you weren't like any other humans, and how true *that* is—but I'm in favor of it. I thought there were four of you?"

"One of us is not a fighter."

"Oh. You can knock off now, if you like. We'll polish off. Thanks much."

"But don't the boys on the ground need some help?"

"The Arpales? Those idiots you have been thinking of as 'guardians'? Which they are, of course. Uh-uh. Besides, we're air-fighters. Ground work is none of our business. Also, these guns would raise altogether too much hell down there. Bound to hit some humans."

"Check. Those Arpales aren't very intelligent, you Arpalones are extremely so. Any connection?"

"Way back, they say. Common ancestry, and doing two

parts of the same job. Killing these fumapties and lemarts and sencors and what-have-you. I don't know what humanity's job is and don't give a damn. Probably fairly important, some way or other, though, since it's our job to see that the silly, gutless things keep on living. We have nothing to do with 'em, ever. The only reason I'm talking to you is you're not really human at all. You're a fighter, too, and a damn good one."

"I know what you mean," and the three Tellurians turned their attention downward to the scene on the ground.

The heaviest fighting had been over a large park at the city's edge, which was now literally a shambles. Very few people were to be seen, and those few more moving unconcernedly away from the center of violence. All over the park thousands of Arpales were fighting furiously and hundreds of them were dying. For hundreds of the sencors had suffered only wing injuries, the long fall to ground had not harmed them further, and their tremendous fighting ability had been lessened very little if at all.

"But I'd think, just for efficiency if nothing else," Garlock argued, "you'd support the Arpales *some* way. Lighter guns or something. Why, thousands of them must have been killed, just in this last hour or so."

"Yeah, but that's their business. They breed fast and die

fast. Everything has to balance, you know."

"Perhaps so." Garlock was silenced, if not convinced. "Well, it's about over. What happens to the bodies they're dumping down manholes? They can't go down a sewer that way?"

"Oh, you didn't know? Food."

"Food? For what?"

"The Arpales and us, of course."

"What? You don't mean—you *can't* mean that they—and by your thought, you Arpalones, too—are cannibals!"

"Cannibals? Explain, please? Oh, eaters-of-our-own-species. Of course—certainly. Why not?"

"Why, self-respect . . . common decency . . . respect for one's fellow-man . . . family ties . . ." Garlock was floundering; to be called upon to explain his ingrained antipathy to such a custom was new to his experience.

"You are silly. Worse, squeamish. Worst, supremely illogical." The Arpalone paused, then went on as though trying to educate a hopelessly illogical inferior, "While we do not kill Arpales purposely—except when they over-breed—why waste good meat as fertilizer? If a diet is wholesome, nutritious, well-balanced, and tasty, what shred of difference can it *possibly* make what its ingredients once were?"

"Well, I'll be damned." Garlock quit.

Belle agreed. "This whole deal makes me sick at the stomach

and I think my face is turning green too. But I'm devilishly and gleefully glad, Clee, that I was here to hear *somebody* give you cards, spaces, and big casino and still beat the lights and liver out of you at your own game of cold-blooded logic!"

"We gunners must go now. Would you like to come along with us and see the end of this particular breeding-hole of sensors?"

At high speed the seven flew back along the line of advance of the flying-tiger horde; across a barren valley, toward and to the side of a mountain.

An area almost a mile square of that mountain's side was a burned, blasted, churned, pocked, cratered and flaming waste; and the four helicopters were still working on it. High-energy beams blasted, fairly volatilizing the ground as they struck in as deep as they could be driven. High-explosive shells bored deep and detonated, hurling shattered rock and soil and yellow smoke far and wide; establishing new craters by destroying the ones existing a moment before.

While it seemed incredible that any living thing larger than a microbe could emerge under its own power from such a hell of energy, many flying tigers did; apparently being blown aloft along with the hitherto undisturbed volume of soil in which the creatures had been. Most of them were not fully grown; some were so immature

as to be unrecognizable to an untrained eye; but from all four helicopters hand-guns snapped and cracked. Nothing—but *nothing*—was leaving that field of carnage alive.

"What are you gunners supposed to be doing here?" Garlock asked.

"Oh, the 'copters will be leaving pretty soon—they've got other places to go. But they won't get them all—some of the hatches are too deep—so us four gunners will stick around for two-three days to kill the late-hatchers as they come out."

"I see," and Garlock probed. "There are four cells they won't reach. Shall I bomb 'em out?"

"I'll ask." The slitted red eyes widened and he sent a call. "Commander Knahr, can you hop over here a minute? I want you to meet these things we've been hearing about. They look human, but they really aren't. They're killers, with more stuff and more brains than any of us ever heard of."

Another Arpalone appeared, indistinguishable to Tellurian eyes from any one of the others.

"But why do you want to mix into something that's none of your business?" Knahr was neither officious nor condemnatory. He simply could not understand.

"Since you have no concept of our quality of curiosity, just call it education. The question is, do or do you not want those four deeply-buried cells blasted out of existence?"

"Of course I do."

"Okay. You've got all of 'em you're going to get. Tell your 'copters to give us about five miles clearance, and we'll all fall back, too."

They drew back, and there were four closely-spaced explosions of such violence that one raggedly mushroom-shaped cloud went into the stratosphere and one huge, ragged crater yawned where once churned ground had been.

"But that's *atomic*!" Knahr gasped the thought. "Fall-out!"

"No fall-out. Complete conversion. Have you got a counter?"

They had. They tested. There was nothing except the usual background count.

"There's no life left underground, so you needn't keep this squad of gunners tied up here," Garlock told the commander. "Before we go, I want to ask a question. You have visitors once in a while from other solar systems, so you must have a faster-than-light drive. Can you tell me anything about it?"

"No. Nothing like that would be any of my business." Knahr and the four gunners disappeared; the helicopters began to lumber away.

"Well, *that* helps—I don't think," Garlock thought, glumly. "What a world! Back to the Main?"

In the Main, after a long and fruitless discussion, Garlock called Governor Atterlin, who did not know anything about a

faster-than-light drive, either. There was one, of course, since it took only a few days or a few weeks to go from one system to another; but Hodell didn't have any such ships. No ordinary planet did. They were owned and operated by people who called themselves "Engineers." He had no idea where the Engineers came from; they didn't say.

Garlock then tried to get in touch with the Arpalone Inspector who had checked the *Pleiades* in, and could not find out even who it had been. The Inspector then on duty neither knew or cared anything about either faster-than-light drives or Engineers. Such things were none of his business.

"What difference would it make, anyway?" James asked. "No drive that takes 'a few weeks' for an intra-galaxy hop is ever going to get us back to Tellus."

"True enough; but if there is such a thing I want to know how it works. How are you coming with your calculations?"

"I'll finish up tomorrow easily enough."

Tomorrow came, and James finished up, but he did not find any familiar pattern of Galactic arrangement. The other three watched James set up for another try for Earth.

"You don't think we'll ever get back, do you, Clee?" Belle asked.

"Right away, no. Some day, yes. I've got the germ of an idea. Maybe three or four more hops

will give me something to work on."

"I hope so," James said, "because here goes nothing," and he snapped the red switch.

It was not nothing. Number Two was another guardian Inspector and another planet very much like Hodell. It proved to be so far from both Earth and Hodell, however, that no useful similarities were found in any two of the three sets of charts.

Number Three was equally unproductive of helpful results. James did, however, improve his technique of making galactic charts; and he and Garlock designed and built a high-speed comparator. Thus the time required per stop was reduced from days to hours.

Number Four produced a surprise. When Garlock touched the knob of the testing-box he yanked his hand away before it had really made contact. It was like touching a high-voltage wire.

"You are incompatible with our humanity and must not land," the Inspector ruled.

"Suppose we blast you and your jets out of the air and land anyway?" Garlock asked.

"That is perhaps possible," the Inspector agreed, equably enough. "We are not invincible. However, it would do you no good. If any one of you four leaves that so-heavily-insulated vessel in the atmosphere of this planet you will die. Not quickly, but slowly and with difficulty."

"But you haven't tested *me*!"

Belle said. "Do you mean they'll attack us on sight?"

"There is no need to test more than one. Anyone who could live near any of you could not live on this planet. Nor will they attack you. Don't you know what the thought 'incompatible' means?"

"With us it does not mean death."

"Here it does, since it refers to life forces. The types are mutually, irreconcilably antagonistic. Your life forces are very strong. Thus, no matter how peaceable your intentions may be, many of our human beings would die before you would, but you will not live to get back to your ship if you land it and leave its protective insulation."

"Why? What is it? How does it work?" Belle demanded.

"It is not my business to know; only to tell. I have told. You will go away now."

Garlock's eyes narrowed in concentration. "Belle, can you blast? I mean, could you if you wanted to?"

"Certainly . . . why, I don't *want* to, Clee!"

"I don't, either—and I'll file that one away to chew on when I'm hungry some night, too. Take her up, Jim, and try another shot."

Numbers Five to Nine, inclusive, were neither productive nor eventful. All were, like the others, Hodell all over again, in everything fundamental. One was so far advanced that almost

all of its humanity were Seconds; one so backward—or so much younger—that its strongest telepaths were only Fours. The Tellurians became acquainted with, and upon occasion fought with, various types of man-sized monsters in addition to the three varieties they had seen on Hodell.

Every planet they visited had Arpalones and Arpales. Not by those names, of course. Local names for planets, guardians, nations, cities, and persons went into the starship's tapes, but that welter of names need not be given here; this is not a catalogue. Every planet they visited was peopled by *Homo Sapiens*; capable of inter-breeding with the Tellurians and eager to do so—especially with the Tellurian men. Their strict monogamy was really tested more than once; but it held. Each had been visited repeatedly by star-ships; but all Garlock could find out about them was that they probably came from a world somewhere that was inhabited by compatible human beings of Grade Two. He could learn nothing about the faster-than-light drive.

Number Ten was another queer — the Tellurians were found incompatible.

"Let's go down anyway." Belle suggested. "Overcome this unwillingness of ours and find out. What do you think they've got down there, Cleè Garlock, that could possibly handle you and me both?"

"I don't think it's a case of 'handling' at all. I don't know what it is, but I believe it's fatal. We won't go down."

"But it doesn't make sense!" Belle protested.

"Not yet, no; but it's a datum. Enough data and we'll be able to formulate a theory."

"You and your theories! I wish we could get some *facts*!"

"You can call that a fact. But I want you and Jim to do some math. We know that we're making mighty long jumps. Assuming that they're at perfect random, and of approximately the same length, the probability is greater than one-half that we're getting farther and farther away from Tellus. Is there a jump number, N, at which the probability is one-half that we land nearer Tellus instead of farther away? My jump-at-conclusions guess is that there isn't. That the first jump set up a bias."

"Ouch. *That* isn't in any of the books," James said. "In other words, do we or do we not attain a maximum? You're making some bum assumptions; among others that space isn't curved and that the dimensions of the universe are very large compared to the length of our jumps. I'll see if I can put it into shape to feed to Compy. You've always held that these generators work at random—the rest of those assumptions are based on your theory?"

"Check. I'm not getting any-

where studying my alleged Xenology, so I'm going to work full time on designing a generator that will steer."

"You tried to before. So did everybody else."

"I know it, but I've got a lot more data now. And I'm not promising, just trying. Okay? Worth a try?"

"Sure—I'm in favor of anything that has any chance at all of working."

Jumping went on; and Garlock, instead of going abroad on the planets, stayed in the *Pleiades* and worked.

At Number Forty-three, their reception was of a new kind. They were compatible with the people of this world, but the Inspector advised them against landing.

"I do not forbid you," he explained, carefully. "Our humans are about to destroy themselves with fission and fusion bombs. They send missiles, without warning, against visitors. Thus, the last starship to visit us here disregarded my warning and sent down a sensing device as usual—Engineers do not land on non-telepathic worlds, you know—and it was destroyed."

"You're a Guardian of Humanity," Garlock said. "Can't you straighten people out?"

"Of course not!" The Arpalone was outraged. "We guard humanity against incompatibles and non-humans; but it is not our business to interfere with humanity if it wishes to destroy

itself. That is its privilege and its own business!"

Garlock probed down. "No telepathy, even—not even a Seven. This planet is backward—back to Year One. And nothing but firecrackers—we're going down, aren't we?"

"I'll say we are!" Belle said. "This will break the monotony, at least," and the others agreed.

"You won't object, I take it," Garlock said to the Inspector, "if we try to straighten them out. We can postpone the blow-up a few years, at least."

"No objections, of course. In fact, I can say that we Guardians of Humanity would approve such action."

Down the *Pleiades* went, into the air of the nation known as the "Allied Republican Democracies of the World," and an atomic-warheaded rocket came flaming up.

"Hm . . . m . . . m. Ingenious little gadget, at that," James reported, after studying it thoroughly. "Filthy thing for fall-out, though, if it goes off. Where'll I flip it, Clee? One of their moons?"

"Check. Third one out—no chance of any contamination from there."

The missile vanished; and had any astronomer been looking at that world's third and outermost moon at the moment, he might have seen a tremendous flash of light, a cloud of dust, and the formation of a new and different crater among the hundreds already there.

"No use waiting for 'em, Jim. All three of you toss everything they've got out onto that same moon, being sure not to hurt anybody—yet. I'll start asking questions."

The captain who had fired the first missile appeared in the Main. He reached for his pistol, to find that he did not have one. He tensed his muscles to leap at Garlock, to find that he could not move.

Garlock drove his probe. "Who is your superior officer?" and before the man could formulate a denial, that superior stood helpless beside him.

Then three—and four. At the fifth:

"Oh, you are the man I want. Prime Minister—euphemism for Dictator—Sovig. Missile launching stations and missile storage? You don't know? Who does?"

Another man appeared, and for twenty minutes the *Pleiades* darted about the continent.

"Now submarines, atomic and otherwise, and all surface vessels capable of launching missiles." Another man appeared.

This job took a little longer, since the crew of each vessel had to be teleported back to their bases. An immense scrap-pile, probably visible with a telescope of even moderate power, built up rapidly on the third moon.

"Now a complete list of your uranium-refining plants, your military reactors, heavy-water and heavy-hydrogen plants, and

so on." Another man appeared, but the starship did not move.

"Here is a list of plants," and Garlock named them, coldly. "You will remember them. I will return you to your office, and you may—or may not, as you please—order them evacuated. Look at your watch. We start destroying them in exactly seventy-two of your hours from this moment. Any and all persons on the properties will be killed; any within a radius of ten of your miles may be killed. Our explosives are extremely powerful, but there is no radio-activity and no danger from the fall-out. The danger is from flash-blindness, flash-burn, sheer heat, shock-wave, concussion, and flying debris of all kinds."

The officer vanished and Garlock turned back to the Prime Minister.

"You have an ally, a nation known as the 'Brotherhood of People's Republics.' Where is its capital? Slide us over there, Jim. Now, Prime Minister Sovig, you and your ally, the second and first most populous nations of your world, are combining to destroy—a pincers movement, let us say?—the third largest nation, or rather, group of nations—the Nations of the North . . . Oh, I see. Third only in population, but first in productive capacity and technology. They should be destroyed because their ideology does not agree with yours. They are too idealistic to strike first, so you will. After you strike, they will

not be able to. Whereupon you, personally, will rule the world. I will add to that something you are not thinking, but should: You will rule it until one of your friends puts his pistol to the back of your neck and blows your brains out."

They were now over the ally's capitol; which launched five missiles instead of one. Garlock collected four more men and studied them.

"Just as bad—if possible, worse. Who, Lingonor, is the leader of your opposition, if any?" Another man, very evidently of the same race, appeared.

"Idealistic, in a way, but spineless and corrupt," Garlock announced to all. "His administration was one of the most corrupt ever known on this world. We'll disarm them, too."

They did. The operation did not take very long; as this nation—or group, it was not very clear exactly what it was—while very high in manpower, was very low in technology.

The starship moved to a station high above the Capitol Building of the Nations of the North and moved slowly downward until it hung poised one scant mile over the building. Missiles, jets, and heavy guns were set and ready, but no attack was made. Therefore Garlock introduced himself to various personages and invited them aboard instead of snatching them; nor did he immobilize

them after they had been teleported aboard.

"The president, the chief of staff, the Chief Justice, the most eminent scientist, the head of a church, the leaders of the legislative body and four political bosses, the biggest business man, biggest labor leader, and biggest gangster. Fourteen men." As Garlock studied them his face hardened. "I thought to leave your Nations armed, to entrust this world's future to you, but no. Only two of you are really concerned about the welfare of your peoples, and one of those two is very weak. Most of you are of no higher motivation than are the two dictators and your gangster Clyden. You are much better than those we have already disarmed, but you are not good enough."

Garlock's hard eyes swept over the group for two minutes before he went on:

"I am opening all of your minds, friend and foe alike, to each other, so that you may all see for yourselves what depths of rottenness exist there and just how unfit your world is to associate with the decent worlds of this or any other galaxy. It would take God Himself to do anything with such material, and I am not God. Therefore, when we have rid this world of atomics we will leave and you will start all over again. If you really try, you can not only kill all animal life on your planet, but make it absolutely uninhabitable for . . ."

"Stop it, Clee!" Lola jumped up, her eyes flashing. Garlock dropped the tuned group, but Belle took it over. Everyone there understood every thought. "Don't you *see*, you've done enough? That now you're going too far? That these twenty-odd men, having had their minds opened and having been given insight into what is possible, will go forward instead of backward?"

"Forward? With such people as the Prime Ministers, the labor and business leaders, the bosses and the gangsters to cope with? Do you think they've got spines stiff enough for the job?"

"I'm sure of it. Our world did it with no better. Millions and millions of other worlds did it. Why can't this one do it? Of course it can."

"May I ask a couple of questions?" This thought came from the tall, trim, soldierly Chief of Staff.

"Of course, General Cordeen."

"We have all been taking it for granted that you four belong to some super-human race; some kind or other of *Homo Superior*. Do I understand correctly your thought that your race is *Homo Sapiens*, the same as ours?"

"Why, of course it is," Lola answered in surprise. "The only difference is that we are a few thousand years older than you are."

"You said also that there were 'millions and millions' of worlds that have solved the problems facing us. Were all these worlds

also peopled by *Homo Sapiens*? It seems incredible."

"True, nevertheless. On any and every world of this type humanity is identical physically; and the mental differences are due only to their being in different stages of development. In fact, every planet we have visited except this one makes a regular custom of breeding its best blood with the best blood of other solar systems. And as to the 'millions and millions,' I meant only a very large but indefinite number. As far as I know, not even a rough estimate has ever been made—has there, Clee?"

"No, but it will probably turn out to be millions of millions, instead of millions *and* millions; and squared and then cubed at that. My guess is that it'll take another ten thousand years of preliminary surveying such as we're doing, by all the crews the various Galaxian Societies can put out, before even the roughest kind of an estimate can be made as to how many planets are inhabited by mutually fertile human peoples."

For a moment the group was stunned. Then:

"Do you mean to say," asked the merchant prince, "that you Galaxians are not the only ones who have interstellar travel?"

"Far from it. In fact, yours is the only world we have seen that does not have it, in one form or another."

"Oh? More than one way? That makes it still worse.

Would you be willing to sell us plans, or lease us ships . . . ?”

“So that you could exploit other planets? We will not. You would get nowhere, even if you had an interstellar drive right now. You, personally, are a perfect example of what is wrong with this planet. Rapacious, insatiable; you violate every concept of ethics, common decency, and social responsibility. Your world’s technology is so far ahead of its sociology that you not only should be, but actually are being, held in quarantine.”

“What?”

“Exactly. One race I know of has been inspecting you regularly for several hundreds of your years. They will not make contact with you, or allow you to leave your own world, until you grow up to something beyond the irresponsible-baby stage. Thus, about two and one-half of your years ago, a starship of that race sent down a sensing element—unmanned, of course—to check your state of development. Brother Sovig volatilized it with an atomic missile.”

“We did not do it,” the dictator declared. “It was the war-mongering capitalists.”

“You brainless, mindless, contemptible idiot,” Garlock sneered. “Are even you actually stupid enough to try to lie with your mind? To minds linked to your own and to mine?”

“We did do it, then, but it was only a flying saucer.”

“Just as this ship was, to you, only a flying saucer, I suppose.

So here’s something else for you to think about, Brother Sovig, with whatever power your alleged brain is able to generate. When you shot down that senser, the starship did not retaliate, but went on without taking any notice of you. When you tried to shoot *us* down, we took some slight action, but did not kill anyone and are now discussing the situation. Listen carefully now, and remember—it is very possible that the next craft you attack in such utterly idiotic fashion will, without any more warning than you gave, blow this whole planet into a ball of incandescent gas.”

“Can that actually be done?” the scientist asked. For the first time, he became really interested in the proceedings.

“Very easily, Doctor Cheswick,” Garlock replied. “We could do it ourselves with scarcely any effort and at very small cost. You are familiar, I suppose, with the phenomenon of ball lightning?”

“Somewhat. Its mechanism has never been elucidated in any very satisfactory mathematics.”

“Well, we have at our disposal a field some . . .”

“Hold it, Clee,” James warned. “Do you want to put out that kind of stuff around here?”

“Um . . . m . . . m. What do you think?”

James studied Cheswick’s mind. “Better than I thought,” he decided. “He has made two really worth-while intuitions—a

genius type. He's been working on what amounts almost to the Coupler Theory for ten years. He's almost got it, but you know intuitions of that caliber can't be scheduled. He might get it tomorrow—or never. I'd say push him over the hump."

"Okay with me. We'll take a vote—one blackball kills it. Brownie? Just the link, of course. A few hints, perhaps, at application, but no technological data."

"I say give it to him. He's earned it. Besides, he isn't young and may die before he gets it, and that would lose them two or three hundred years."

"Belle?"

"In favor. Shall I drop the linkage? No," she answered her own question. "No other minds here will have any idea of what it means, and it may do some of them a bit of good to see one of their own minds firing on more than one barrel."

"Thank you, Galaxians." The scientist's mind had been quivering with eagerness. "I am inexpressibly glad that you have found me worthy of so much help."

Garlock entered Cheswick's mind. First he impressed, indelibly, six symbols and their meanings. Second, a long and intricate equation; which the scientist studied avidly.

During the ensuing pause, Garlock cut the President and Chief of Staff out of the linkage. "We have just given Cheswick

a basic formula. In a couple of hundred years it will give you full telepathy, and then you will begin really to go up. There's nothing secret about it—in fact, I'd advise full publication—but even so it might be a smart idea to give him both protection and good working conditions. Brains like his are apt to be centuries apart on any world."

"But this is . . . it could be . . . it *must* be!" Cheswick exclaimed. "I *never* would have formulated *that*! It isn't quite implicit, of course, but from this there derives the existence of, and the necessity for, electrogravitics! An entirely new field of reality and experiment in science!"

"There does indeed," Garlock admitted, "and it is far indeed from being implicit. You leaped a tremendous gap. And yes, the resultant is more humanistic than technological."

Belle's ear-splitting whistle resounded throughout the Main. "How do you like *them* tid-bits, Clee?" she asked. "Two hundred years in seventy-eight seconds? You folks will have telepathy by the time your present crop of babies grows up. Clee, aren't you sorry you got mad and blew your top and wanted to pick up your marbles and go home? *Three* such intuitions in one man's lifetime beats par, even for the genius course."

"It sure does," Garlock admitted, ruefully. "I should have studied these minds—particularly his—before jumping at conclusions."

"May I say a few words?" the president asked.

"You may indeed, sir. I was hoping you would."

"We have been discouraged; faced with an insoluble problem. Sovig and Lingonor, knowing that their own lives were forfeit anyway, were perfectly willing to destroy all the life on this world to make us yield. Now, however, with the insight and the encouragement you Galaxians have given us, the situation has changed. Reduced to ordinary high explosives, they cannot conquer us . . ."

"Especially without an airforce," Lola put in. "I, personally, will see to it that every bomber and fighter plane they now have goes to the third moon. It will be your responsibility to see to it that they do not rebuild."

"Thank you, Miss Montandon. We will see to it. As for our internal difficulties—I think, under certain conditions, they can be handled. Our lawless element," he glanced at the gangster, "can be made impotent. The corrupt practices of both capital and labor can be stopped. We have laws," here he looked at the members of Congress and the judge, "which can be enforced. The conditions I mentioned would be difficult at the moment, since so few of us are here and it is manifest that few if any of our people will believe that such people as you Galaxians really exist. Would it be possible for you, Miss Montan-

don, to spend a few days—or whatever time you can spare—in showing our Congress, and as many other groups as possible, what humanity may hope to become?"

"Of course, sir. I was planning on it."

"I'm afraid that is impossible," the Chief of Staff said.

"Why, General Cardeen?" Lola asked.

"Because you'd be shot," Cardeen said, bluntly. "We have a very good Secret Service, it is true, and we would give you every protection possible; but such an all-out effort as would be made to assassinate you would almost certainly succeed."

"Shot?" Garlock asked in surprise. "What with? You haven't anything that could even begin to crack an Operator's Shield."

"With this, sir." Cardeen held out his automatic pistol for inspection.

"Oh, I hadn't studied it . . . a pellet-projector . . ."

"*Pellet!* Do you call a four-seventy-five slug a pellet?"

"Not much of that, really . . . it shoots eight times—shoot all eight of them at her. None of them will touch her."

"*What?* I will not! One of those slugs will go through three women like her, front to back in line."

"I will, then." The pistol leaped into Garlock's hand. "Hold up one hand, Brownie, and catch 'em. Don't let 'em splash—no deformation, so he can recognize his own pellets."

Holding the unfamiliar weapon in a clumsy, highly unorthodox grip—something like a schoolgirl's first attempt—Garlock glanced once at Lola's upraised palm and eight shots roared out as fast as the gases of explosion could operate the mechanism. The pistol's barrel remained rigidly motionless under all the stress of ultra-rapid fire. Lola's slim, deeply-tanned arm did not even quiver under the impact of that storm of heavy bullets against her apparently unsupported hand. No one saw those bullets strike that gently-curved right palm, but everyone saw them drop into her cupped left hand, like drops of water dripping rapidly from the end of an icicle into a bowl.

"Here are your pellets, General Cardeen." Lola handed them to him with a smile.

"Holy — Jumping — Snakes!" the general said, and:

"Wotta torpedo!" came the gangster's envious thought.

"You see, I am perfectly safe

from being 'shot,' as you call it," Lola said. "So I'll come down and work with you. You might have your news services put out a bulletin, though. I never have killed anyone, and am not going to here, but anyone who tries to shoot me or bomb me or anything will lose both hands at the wrists just before he fires. That would keep them from killing anyone standing near me, don't you think?"

"I should *think* it would," General Cordeen thought, and a pall of awe covered the linked minds. The implications of the naively frank remark just uttered by this apparently inoffensive and defenseless young woman were simply too overwhelming to be discussed.

"Anything else on the agenda, Clee?" Lola asked.

There was not, and the starship's guests were returned, each to his own home place.

And not one of them, it may be said, was exactly the same as he had been.

(To be continued)

The Big Science-Fiction Event for 1959 is

THE 17th ANNUAL

WORLD SCIENCE-FICTION CONVENTION

Labor Day Week-end September 4th to September 7th

Pick-Fort Shelby Hotel • Detroit, Michigan

For details write:

DETENTION, 2218 Drexel Street, Detroit 15, Michigan

JUBILATION, U.S.A.

By G. L. VANDENBURG

You've heard, I'm sure, about the two Martians who went into a bar, saw a jukebox flashing and glittering, and said to it, "What's a nice girl like you doing in a joint like this?" Well, here's one about two Capellans and a slot-machine....

TORYL pointed the small crypterpreter toward the wooden, horseshoe - shaped sign. The sign's legend was carved in bright yellow letters. Sartan, Toryl's companion, watched up and down the open highway for signs of life. In seconds the small cylindrical mechanism completed the translation.

The sign said:

JUBILATION, U.S.A.!!

The doggondest, cheeriest little town in America!

The two aliens smiled at each other. Unaccustomed to oral conversation, they exchanged thoughts.

"The crypterpreter worked incredibly fast. The language is quite simple. It would seem safe to proceed. The sign indicates

friendliness," thought Toryl, the older of the two Capellans.

"Very well, Brother," replied Sartan, "though I still worry for the safety of the ship."

"Sartan, our instruments tell us that anyone who discovers the ship," Toryl explained, a trifle impatient, "will show a remarkable degree of curiosity before they display any hostility."

Sartan agreed to dismiss his worries and the two aliens began to walk along the barren highway. Before them, at a great distance, they could see a cluster of small frame buildings. When they had walked a hundred feet or more they encountered another sign.

JUBILATION, U.S.A.!!

WELCOME, STRANGER! See America first and begin with
JUBILATION!

And several hundred feet further two more signs.

THE ROTARY CLUB of Jubilation welcomes and extends the warm hand of friendship to you!!!! You are now entering Paradise, brother!

HOWDY, STRANGER! COME RIGHT ON IN, STAY AWHILE AND MAKE YOURSELF TO HOME!

—Jubilation Chamber of Commerce—

As members of a peaceful race, Toryl and Sartan naturally found the signs encouraging. They walked at a sprightly pace.

A whirring noise behind them brought the two to a halt. They turned to discover a pre-war Chevy choking its way along the road. The aliens edged their way to a gulley along the side of the road. They were confident of a friendly reception but, in the event their calculations had been wrong, they poised themselves to make a break in the direction of their ship.

The ancient Chevy sputtered by. The driver was almost as ancient as the car, a bearded fellow with a stogy stuck between his teeth and a crushed hat on his head.

The driver slowed down when he saw the aliens. "Howdy, strangers!" he yelled cheerily. "Say, ain't you fellers a mite warm in them coveralls?" He cackled merrily, put his foot to the floor and sped on by.

Sartan looked at his companion. "*I am sorry, I should not have doubted you, Brother. You were right. These people will welcome our visit. They seem very cordial.*"

"*Good, Sartan. Let us continue.*"

One hundred yards further they were confronted by still another brace of signs. They stopped once more.

CITY LIMITS

(Gambling allowed)

JUBILATION! Where troubles never come due, 'cause the Good Lord takes a likin' to you!

Where gloom and doom are outlawed and there's never any sadness.

Where a smile lights up the midnight sky and gives off only gladness!

(Gambling allowed)

The second sign was another in the shape of a horseshoe.

Beyond This Point You Have 4372 Friends You Never Had Before!!!

(Gambling allowed)

Suddenly Toryl stopped and played with several switches and dials on the crypterpreter.

"*What is wrong, Brother?*" asked the puzzled Sartan.

"*I receive no direct translation for the term 'gambling'.*"

"What is the closest term the machine gives?"

"Fraternizing."

Sartan laughed. "Now it is you who fret, Toryl. According to the signpost legends 'fraternizing' would seem to be accurate."

A steady rolling sound of passionless one-armed bandits drowned out all other noise in Okie's Oasis Bar. As a result, Toryl and Sartan drew little attention when they entered. Except for their blue-metallic space suits they looked like and were ordinary humans.

They proceeded rather timidly toward the bar. Okie, the proprietor, was on duty readying the place for the night shift. Toryl held up his hand. The crypterpreter had already informed him that oral conversation was the manner of communication on the strange planet. Such conversation had long ago been abandoned on the planet Capella, but learned men such as Toryl and Sartan were familiar with how it was done, though when they spoke they sometimes had to halt between syllables.

"How-dy!" Toryl flashed a wide grin at the barkeep.

"Just hold your horses there, mister!" was Okie's sharp reply. "You ain't the only snake in this desert. There's four customers ahead of you!"

Sartan transmitted an admonishing thought to his companion. "*Toryl, you should have noticed that the man was busy. He has only two hands.*"

"Forgive me, Brother, I was blinded by my own excitement."

The two Capellans waited and were soon attracted by the silver-handled machines that seemed to have most of the customers fascinated.

Sartan wandered over to where a small crowd of men was gathered around a single machine. A huge man, raw-boned and crimson-faced, wearing surplus army suntans, was operating the machine.

The big man dropped a large coin into a slot. He gave the silver handle a vicious snap. It made a discordant, bone-crushing sound. Three little wheels, visible under glass, spun dizzily. Anxious, screwed-up faces looked on as the first little wheel stopped. *Bell Fruit.*

A collective gasp came from the small crowd. The second little wheel stopped. *Bell Fruit.*

Another gasp.

Sartan touched the arm of the man operating the gambling device. "I beg your pardon, but could you please tell me—"

The big man wheeled around like a bear aroused from hibernation. "Hands off, mister! You trying to jinx me?"

The third little wheel stopped. *Lemon.*

The crowd groaned. The big man turned on Sartan again, a wild and furious look in his eye. "You jinxed me! Damn you, I oughta' bust you one right in the snout!"

"My humble apol-o-gies, sir," the bewildered Sartan began.

"I'll give you your humble apologies right back with my fist," roared the gambler.

Toryl quickly made his way through the small crowd which by now was itching to witness a fight. "Ex-cuse me, sir, but my friend did not real-ize—"

"The hell he didn't!" The gambler fumed. "He was trying to jinx me, by God! And I'm gonna teach him to keep his paws—"

"Okay, okay, you guys, break it up!!" It was Okie, massive and mean looking, using his barrel belly to push his way through to the two aliens and the unlucky gambler. "What's goin' on here, Smokey?" he inquired of the gambler.

"Okie, I had a jackpot work-in' when this dumb jerk here ups and grabs my arm—"

Toryl interrupted with, "My friend is sorry for what he did, sir."

Okie stabbed a cigar into his mouth. "Who *are* you guys anyhow? Where'd you dig up them crazy coveralls?"

"Sure a queer way to dress in this heat," spoke a voice from the crowd.

This was the moment of pride that Toryl and Sartan had looked forward to. They both grinned confident grins. "We have come to you from Capella," he said with some exultation.

Okie's face went blank. "Capella! Where the hell is that?"

"Sounds like one of them damn hick towns in California," said Smokey, the gambler.

Toryl, somewhat deflated, but by no means defeated, hastened to elucidate. "Capella is lo-cat-ed in the con-stell-a-tion which you call Auriga."

"Anybody know what the hell he's talking about?" asked the annoyed saloonkeeper.

Toryl and Sartan exchanged troubled glances. Sartan took up the cudgel. "Auriga is a constellation, a star cluster, sir. It is forty-two million light years away."

"What in tarnation is a light year?" asked an old-timer in the group.

Another replied, "They must be from Alaska. They got light years up there, sometimes stays light the whole confounded year 'round."

"That must be it," agreed Okie, "and that's why they're wearin' them crazy suits." The saloonkeeper unloosed a grim laugh. "You can take them arctic pajamas off now, boys. Weather's kinda warm in these parts!"

"Hey, fellas!" a voice shot out, "didya bring any Eskimo babes down with you?"

The crowd roared approval at the witticism.

Toryl transmitted a depressing thought to his companion. "*I fear they do not believe us, Sartan.*"

Sartan did not get the opportunity to answer immediately.

"Listen, you guys," Okie pounded his fat finger into Sartan's chest. "I want you to be-

have yourselves, understand? Now that means lay off the customers while they're at the games. You wanna gamble there is plenty of machines available. I got a respectable place, I wanna keep it that way!" He turned and addressed the other men. "All right, boys, fun's over! No fight today! Drink up and gamble your money away. Let's get back to the games."

It was necessary for Toryl to use the crypterpreter to translate the various signs along the bar. Okie saw the small cylindrical machine sitting on the bar. His curiosity bested him. He gave it a more thorough examination than a dog gives a fire-plug.

Some of the signs read: **"DOUBLE BOURBON—\$2.10" "COOL GIN RICKEY—\$1.25" "IN GOD WE TRUST, BUT NOBODY ELSE!" "RUM COLLINS—\$1" "A FRIEND IN NEED IS A FRIEND INDEED" "NO INDIANS SERVED HERE" and "SCOTCH—IMPORTED, \$1.50 — DOMESTIC, \$1.30."**

"Cool gin rick-ey," said Toryl. "Comin' right up," Okie mumbled, his attention still wrapped around the crypterpreter. "Say, what is this gadget anyway?"

"It is a cryp-terp-reter," Toryl beamed with pride. "It en-ables us to un-der-stand and speak your lan-guage."

"Aw, go on!" Okie managed a fainthearted grin, uncertain of whether his leg was being pulled. "Come on now, tell me what it is."

"But I have just told you, sir."

The barkeep cursed under his breath. "Two gin rickeys, did you say?"

"Yes."

Okie brought the drinks.

Sartan smiled broadly. "Thank you ex-ceed-ing-ly."

"That'll be two-fifty."

Toryl raised his glass as though making a toast. "Two-fif-ty!" he repeated.

Okie caught his arm and brought the glass down.

"Two-fifty!" the barkeep said with grim insistence.

Sartan pursed his lips comprehendingly. He removed a large pentagonal piece of metal from his pocket and gave it to Okie.

Okie took the piece between his fingers, examined it and frowned. "I give up. What is it?"

Sartan had to glance at Toryl for an answer. Toryl threw a switch on the crypterpreter.

"Money," Toryl silently advised him.

"Money," said Sartan to Okie.

"You guys hold on and don't drink up yet," growled the barkeep. He then yelled in the direction of the blackjack table. "Hey, Nugget! Get on over here, I need you!!"

A wiry little man with a full, unkempt beard, hustled over to the bar. "Nugget McDermott at yer service, Okie! What's yer pleasure?" he asked with a sunny smile.

"Take a look at this." Okie handed him the piece of metal.

The old prospector turned it over in his hands, bit it and then held it in his palm as though to judge its weight. His expert opinion was, "It's gold, Okie," and was uttered without a shred of modesty.

"Are you sure?"

The old-timer was highly insulted. "Am I sure!! Why you lop-eared, sun-stroked jackass, of course I'm sure!!! Nugget McDermott is drawn to gold like nails to a magnet! Why when this here town was nothin' but a patch of cactus—"

"All right, all right," Okie waved him off, "don't get your gander up! Go on back to the blackjack table and tell Sam to give you a drink on the house."

"Much obliged, Okie, much obliged," said Nugget, doffing his hat and trotting back to the blackjack table.

The barkeep's face was pure sunshine when he turned to the aliens again. "Gentlemen, with this kind of a substitute you don't need money in my place. Drink up!"

"Thank you ex-ceed-ing-ly," said Sartan.

Okie arbitrarily judged the gold piece to be worth ten dollars. "The management invites you to try your luck, gentlemen. Go on give it a whirl."

Toryl and Sartan wore blank expressions as Okie slapped seven dollars and fifty cents change on the bar—four silver dollars, four half-dollars and six quarters.

"Don't be bashful, gentlemen.

Okie's machines are friendly to one and all," said the barkeep.

Toryl removed the change and gave his companion two silver dollars, two half-dollars and three quarters.

"*What is the purpose of the machines?*" thought Sartan as they approached the one-armed bandits.

"*I suppose that is what the one called Okie wishes us to learn.*"

"*Perhaps it is some type of registration machine.*"

"*It is doubtful. The gentleman you disturbed has been at the same machine since we arrived.*"

Sartan gripped the handle of a vacant machine. "*Do you think it might be a kind of intelligence test?*"

In lieu of an answer Toryl focused his attention on a small card, above the machine, which gave the winning combinations.

"*There is that term again.*"

"*What term?*"

"*Gambling.*" Toryl pointed to a line on the card warning minors not to gamble. A look of perplexity fell upon his face. "*I am no longer sure the term has anything to do with fraternizing,*" he observed mentally.

"*Let us find out.*"

Sartan placed a quarter in the coin slot. The three little wheels went spinning. Cherry. Lemon. Lemon.

Nothing.

Toryl and Sartan looked at each other, their faces blanker than ever.

"Try it again."

Sartan disposed of another quarter. They waited. Lemon. Plum. Plum.

Nothing.

Toryl inspected the machine from every angle, like a man on the outside trying to figure a way in. *"Let me try it."*

He put a quarter in the slot.

Three lemons.

"It isn't very interesting, is it?" thought Sartan.

"Why don't we try the larger pieces?"

"A splendid idea, Brother."

The larger coins did not fit. Toryl proceeded to report this sad state of affairs to Okie and was amazed when, for the eight large coins, Okie rewarded him with twenty-four smaller ones. He went back to his companion at the one-armed bandit.

They then dropped twenty consecutive quarters into the appropriately named machine without getting so much as a single quarter in return.

"It is puzzling, is it not, Brother?"

"Yes, Sartan. From all indications it would seem to be a machine totally without purpose."

"It does consume money."

"But why would one build a machine whose sole purpose is to consume money?"

Sartan gave it some hard thought. *"I don't know!"*

"Remarkable!" Toryl concluded. *"But nothing is done without a purpose."*

"Obviously we've found something that is."

"No, I do not believe that. Let me have the electro-analyzer."

The aliens were so engrossed in their problem as to be unaware that Okie and two men at the bar were casting suspicious eyes on them.

Sartan fished around in his pocket and produced a small object in the shape of an irregular triangle. Toryl took the electro-analyzer from him, removed the cover and moved his finger around inside. He replaced the cover and slapped the electro-analyzer against the side of the one-armed bandit. When he took his hand away the small object stuck to the machine like a leech.

Okie scratched his head and addressed one of the two men at the bar. *"What the hell you suppose they're doin', Sam? What's that gadget for?"*

"Search me," replied Sam, a well dressed, stoop-shouldered gent, *"but if you want my opinion it doesn't look legal."*

"Hey, Nugget!" yelled the barkeep.

Again the little old prospector hustled himself over to the bar.

"Nugget McDermott at your service! What'll it be, Okie?"

"Go on over and get the sheriff. Tell him there's two queer characters here trying to jimmy one of my machines in broad daylight."

The old man's feet kicked up sawdust as he scampered out the door. Okie kept his attention riveted to the two aliens.

Toryl was busy adjusting the

electro-analyzer to the best possible position.

"What if it does not respond to this machine?" Sartan wanted to know.

"I do not think the machine contains any type of metal with which we are unfamiliar. We will have a reading in one minute."

The aliens took a step backward and waited.

A sudden noise, like that of a television tube exploding, jolted everyone in the room, including Toryl and Sartan. The blackjack table emptied. Gamblers left their machines. A semi-circle of the curious formed around the two aliens. Okie lit out from behind the bar and elbowed his way through the crowd.

The aliens' concentration was unbroken by the attention they had aroused. With all the single mindedness of religious fanatics they continued to observe the strange mechanical device.

Okie was dumbfounded to find the machine still in one piece and doubly dumbfounded to discover it was behaving in a most unconventional manner. It was emitting a low steady gurgling sound and an occasional sputter or burp. The legs of the machine seemed unsteady. Its body shifted back and forth in herky-jerky motions like an old-fashioned washing machine. The three little Bell Fruit wheels were spinning at the speed of an airplane propeller. Okie thought they might never stop again.

"What the hell are you crazy

galoots doing to my machine!" he bellowed.

Before the aliens could answer there was another explosive sound, causing the crowd to jump back several steps. Quarters fell from the mouth of the machine, slowly at first, then at an alarming rate. The coins fell, bounced and rolled all over the floor. The crowd gulped with fascination.

"Holy catfish!" said one of the men, "how long since that blasted thing's paid off?"

"Looks like this is the first time," said one of the others.

"You guys keep quiet!" yelled Okie.

The coins continued to fall for what seemed like a record time. The crowd was spellbound. Okie watched in silent fury.

And the aliens were more confused than they had been when the machine *wasn't* paying off.

The one-armed bandit finally coughed out its last quarter. The three Bell Fruit wheels came to an abrupt halt, as though an inner spring had snapped. The machine broke down. Certain observers later reported that the poor thing actually *looked* exhausted.

The sheriff burst in the door with Nugget McDermott close behind.

"Sheriff, I want you to arrest these two tinhorns!" cried Okie.

"Tinhorns??" Sartan's face was creased with bewilderment.

"What's wrong, Okie?" asked the sheriff.

"Take a look for yourself! These two bugged my machine and then broke it down! Look at that money all over the floor!"

Toryl smiled. "We meant no harm, sir—"

"The hell you didn't mean no harm! You were out to rob me!"

"We were only ex-per-i-ment-ing—"

"There's their crooked experimenting right there!" said Okie, pointing a finger at the deactivated one-armed bandit. "I want them locked up until that machine's paid for!"

"All right," said the sheriff, "you two better come with me."

"But, sir," Sartan protested, "we merely wanted to know how the machine functioned. You see, we are from Capella and—"

"Capella!" exclaimed the sheriff. "Where is that? I never heard of the place."

"Well, it is not a part of your Earth."

"Oh, well why didn't you say so before!" The sheriff winked at the crowd. "You mean you boys are from out of this world?"

"That is correct," Sartan grinned proudly.

"Well, well! That makes a big difference!" The sheriff turned to the crowd. "All right, boys, grab them and hustle them over to the jail house!"

A group of men slowly closed in on the two aliens.

Toryl and Sartan backed away toward the wall.

"I believe they are angry, Brother," thought Sartan.

"But why?" inquired Toryl.

"I do not know. Do you suppose the machine represented some form of religious diety?"

"Exceed-ing-ly possible," Toryl answered.

As the men came closer Okie yelled, "Just get them two crackpots! I'll plug the first man that touches that money!"

The men were diverted by Okie's warning. They didn't notice, until it was almost too late, that the two strangers were halfway out the door.

"Get after them!!" the sheriff bellowed.

The aliens ran as though their lives were at stake, which was true, following the same route they had taken into town.

The crowd followed them as far as the edge of town. From there they hurled rocks.

Toryl and Sartan continued to run at breakneck speed, praying they would reach the safety of the ship. Once they looked behind them and saw that the crowd of angry men had given up the chase.

Halfway back to their ship they passed a sign, though they didn't bother to stop and read it.

**YOU ARE NOW LEAVING
JUBILATION, U.S.A.!!**

The doggondest, cheeriest little town in America! Come back soon!!

THE END



Or so you say

Dear Editor:

I disagree completely with Dr. Barron's article "Earthman Keep Out!" in the December issue of *Amazing*. I hereby give you my concept of the "sufficient reason" mentioned in the editorial of that same issue: I believe the mysterious commodity termed "human nature" dictates that man explore Outer Space. It dictates that the challenge of the unknown be taken up. The major part of human nature, to my mind, is curiosity. Curiosity is one of the items that raises man above the level of animals. When man loses his curiosity, he will cease to be homo sapiens as we know him.

In effect, man has to explore Space because it's there. Human nature will drive man through the Solar System and, if possible, beyond. This is man's duty. This is man's destiny.

Grant Treller
4518 Levelside Ave.
Lakewood, Calif.

Dear Editor:

Most outstanding features in the December issue, I think, are the remarkable editorial and the article by Dr. Arthur Barron. The questions voiced in these features seem like rockets of common sense piercing the glamor-veil which the lay-mind eternally weaves for itself with big-sounding words and phrases. "Outer Space," "Space-time continuum," "Space-warp," "Interplanetary, inter solar, intergalactical" etc.

Very few persons, I venture to guess, have given thought to the probable or improbable purpose or to the multiple results of attaining to the moon, much less to any planet in this solar system alone.

It might give a spaceman quite a shock to pierce the electro-vital "aura" of this planet of ours, to find no moon to be seen anywhere!!

And while to the lay-mind the word "space" means merely "distance" it is not so with esoteric philosophers. Interplanetary travel is probably much more quickly done by way of "consciousness-travel" than by distance-travel as we elementary earthlings understand

same. But will any modern (?) scientist believe that the points of light we call "planets" in the so-called sky are but focal points of the general principles of which the planets are living embodiments, and that a simple (ha!) consciousness-warp would outspeed any material spaceship that might succeed in surviving the "dissolution-stratum" in the puerile effort to transmit earth-type matter to some other planet's material body?

And, as you so aptly say, what price planetary visits? We do not seem able to cause a brotherly, progressive civilization based on human values, even on this wealthy and resourceful Earth of ours.

Miles MacAlpin
740½ S.W. 51st
Portland, Ore.

● *Now let me get this straight. Treller says man must explore space because it's there. MacAlpin says—I think—we must explore space because it isn't there. One thing I know for sure: the question raised in that editorial has kicked up lots of comment.*

Dear Editor:

I used to be a regular science fiction fan but it seemed that a few years ago nearly all the s-f magazines went almost entirely fantastic. I don't care for most fantasy. I heartily commend you for separating your type of stories.

In the December issue of *Amazing* I rate "The Big Count-Down" as being way out in front and among the best of s-f. C. Eric Maine is a very imaginative writer and possesses a style that puts his ideas across very vividly. "Deadly Satellite" and "Unto the Nth Generation" were the next two stories I enjoyed most. I also thought that the article "Earthman Keep Out!" was excellent and thought provoking.

Chester F. Milbourn
Estancia, N. Mexico

Dear Editor:

"The Big Count-Down" by Charles Eric Maine is my reason for writing this letter. As a reader of science fiction I was struck by the falseness of characters in the story; as a graduate student in physics (at the University of California) my main complaint is Mr. Maine's appalling lack of knowledge in the field of basic physics. Perhaps I am a bit too critical because of my work in this field but the final page of the story was just too much to bear.

Let's get a few facts straight: 1) The property of inertia is associated with the mass of a body. 2) The mass of a body is completely independent of its weight, weight being a phenomenon caused by

the gravitational attraction between two masses; in this case the attraction between the mass of the Earth and the mass of the rocket. 3) The force necessary to accelerate a body is proportional to its mass not its weight. 4) As the velocity of a body approaches the velocity of light its mass approaches infinity and therefore the force necessary to accelerate it to a higher velocity becomes infinite.

With these facts in mind we can easily see the absurdity of the theory presented in Mr. Maine's story. I suggest that Mr. Maine might profit from a course in high school physics.

Robert M. Arzt
18 Hillside Court
Berkeley, Calif.

• *The Maine novel brought lots of mail, too. Most of it complimentary, as in the first letter above; some of it critical. Aside to Mr. Arzt: "false characters" is a complaint I'll accept; mass-weight I admit, but don't accept. Remember, the title of our magazine includes the word "fiction."*

Dear Editor:

"The Blonde From Space" started out wonderfully. "The Seven Eyes of Captain Dark" was rather poor, late in starting, but it ended in a bang; one of the most entertaining stories, I think I've ever read in *Amazing*.

James W. Ayers
609 First Street
Attalla, Ala.

Dear Editor:

My ratings on the December issue: Maine can do better. His "Waters Under the Earth" was his best novel. Slesar should hide in a corner after all his other memorable tales; the same is true of the Budrys' story.

Let's have a novel from Bob Silverberg . . . also I'd like to see some more out of A. Bertram Chandler.

Get rid of Cotts as a reviewer; review them yourself if you must, but get something worthwhile in that space.

Paul Shingleton, Jr.
320 26th Street
Dunbar, W. Va.

• *O.K., Silverberg novel coming up soon. And lots more by Chandler. So you don't like Cotts? Just read the second paragraph in the next letter . . .*

(Continued on page 142)

the Spectroscope

by S. E. COTTS

STAR SCIENCE FICTION STORIES #4. Edited by Frederik Pohl. 157 pp. Ballantine Books. Paper: 35¢.

The excellence of Frederik Pohl's anthologies has become a science fiction tradition. The present volume can only add to it. Each year there are many S-F collections published, but Pohl's is one of the few whose stories are all originals. One can read through from cover to cover with no chance of running into a story already met in a magazine or some other source.

Among the authors represented are Henry Kuttner and Cyril Kornbluth, both of whom died recently. Mr. Pohl could not have picked two more fitting stories to pay tribute to them. Not only are both of top quality, but in their brief span of pages they give us the essence of what was unique in each one's writing. Kuttner's is of a mystical cast, full of omens; Kornbluth's is a brief, but frightening satire.

If there is any criticism of the book, it lies in the brevity of the two novelettes. Take the one by James Gunn, for instance. In forty-nine pages he attempts far too much. Granted he does an excellent job, but it only serves to frustrate the serious reader since he tries to encompass such enormities as immortality, the future of the medical profession, a dynasty of superhuman people, a picture of social turmoil, and a love story. An ordinary length novel would be too brief for an adequate coverage of all this.

This shortcoming notwithstanding, Mr. Pohl has brought out another fine volume which will provide a memorable reading experience.

THE SPACE WILLIES. By Eric Frank Russell. 131 pp. Ace Book. Paper: 35¢.

Here is another rough and ready adventure story from the pen

of Mr. Russell. His special forte is to pit one man against myriad hostile forces, usually while that man is far from his home planet. Armed mainly with his wits and a superior kind of ingenuity he always out-thinks, out-talks, and out-maneuvers the enemy. Though there might seem to be little variety in this pattern, it has proved highly satisfactory both in *Wasp* in the past, and in this current novel. There are certain resemblances between the two books, but this doesn't detract from the excitement. Credit belongs, perhaps, not so much to the heroes, as to Mr. Russell's own endless vitality.

THE LANGUAGES OF PAO. *By Jack Vance. 223 pp. Avalon Books. \$2.75.*

This is quite a disappointing book in view of the excellence of some of the underlying ideas. It involves the changes that can be brought about in people by the manipulation of their language. This is an important and interesting subject, and one that is worthy of a much more probing and finely written novel than we have here. Thanks are due Mr. Vance for opening up this line of thought, but for very little else. The story line is right out of a second-rate movie—the slaying of a ruler, the usurping of the throne by the regent during the minority of the rightful heir, the bargain with a sinister wizard to gain an ally, the wizard's subsequent use of the rightful heir as a pawn to gain his own ends.

In spite of this strike against it, the book might have been somewhat more successful had it delved more deeply into the purposes of its main characters. As it is, the motives are over-simplified by explaining them in terms of power greed, or worse still, by not explaining them at all. Thus at the end of the book we aren't left with any clear idea of the next phase of Paonese development, though that was presumably what the fuss was all about.

... OR SO YOU SAY

(Continued from page 140)

Dear Editor:

In the December issue "The Big Count-Down" was excellent. If the quality of these novels stays consistent, *Amazing* will definitely rise in the prozine field.

Why not enlarge your book review column? I think it would be worth the space.

Vic Ryan
2160 Sylvan Rd.
Springfield, Ill.

AN ASIMOV SURPRISE!

(Continued from page 7)

no vices—or, at least, no serious vices. And, oh yes, I like to write. My first attempt at writing came at 12 but the monstrosity that resulted has been burned long ago. Science fiction did not come until I had acquired my first typewriter four years ago, but it was not until the middle of 1938 that I took my life in my hands and bearded the mighty Editor in his den. The Providence that watches over the rash beamed kindly down on me and "*Marooned Off Vesta*" is the result.

There are more stories on the way, some in a stage of partial completion now, and I hope and hope again that this first story does not prove to be a flash in the pan. If it does, it won't be because I didn't try. Anyway, I hope you like the story. After all, it is the readers that are the powers behind the throne and they must be pleased. Au revoir until we meet again; and I sincerely hope we will.

Isaac Asimov

West Newton, Mass.
March, 1959

Dear Editor,

Well, let's see now. My age, as stands documentarily proven in this stuff you're printing, has more than doubled. I am now rapidly approaching the youthful age of 39 and I am no longer an aged patriarch. My physical description is the same except that I have gained about 40 pounds of non-muscle, and look genial as well as handsome.

My mother has not changed her mind about my looks, but neither have other people. Still, I managed to get married 16½ years ago to a girl who's hanging on grimly, despite the advice of her friends. I have a little boy of 7½ and a girl of nigh on to 4, neither of whom quite understand that when I seem to be doing nothing, I am working very hard indeed and *must* have peace, quiet, and a lot of waiting on hand and foot. (Their mother doesn't get the idea, either.)

That *wasn't* the last year at Columbia, as it turned out. What with the war and graduate studies, they couldn't get rid of me till 1949 and then only by bribing me with a Ph.D. The degree was in chemistry, as I changed my mind about medical school. Since I have been teaching biochemistry in a medical school for 10 years, now, I have had a chance to think over my decision in favor of chemistry by observing medical students, and I'm glad, glad, glad. I am far too delicate for the rigors of medical training.

I did manage to sell more pieces—a few hundred of them, what with one thing and another (bribing editors, mostly). This morning

I received copies of my most recently published book, the second of two non-fiction books on organic chemistry. This one is called *The World of Nitrogen* (Abelard-Schuman, 1958, \$2.75 and worth it—free advt.) It's my thirtieth book, though by the time this letter appears I expect one more to be out.

Seriously, I will always be thankful for whatever it was that moved me to begin to write science fiction, and to *Amazing* for the first financial return. This business of writing has given me a happy 20 years, and if I may make another hope—I hope it all continues for a long time.

Isaac Asimov



Copyright 1958, Hugo Gernsback.

A Jules Verne Memorial Medal was struck recently in France. This bronze medal is heavy, and measures 2-3/4" in diameter, and is 3/8" thick. It commemorates the life of Jules Verne and his work. The front is an excellent likeness of Jules Verne; the obverse of the medal reads as follows: Around the World in 80 Days—5 Weeks in a Balloon Voyage From the Earth to the Moon—20,000 Leagues Under the Sea.



SHOPPING GUIDE

Classified

Rate: 25¢ per word including name and address. Minimum 10 words.
Send orders and remittance to AMAZING STORIES, One Park Avenue,
New York City 16, N. Y. Attention Martin Lincoln.

BOOKS—MAGAZINES

FANTASY & SF Books & Mag. lowest prices. list free. Werewolf Bookshop, 7055L Shannon Road, Verona, Pa.

BOOKS, Pocketbooks, magazines. Tremendous stock, reasonable prices. Lists on request. Science-Fiction and Fantasy Publications. 127-01 116th Ave., S. Ozone Park 20, N. Y.

SALE: S-F collection 1953-present, \$.40, 1947-1952 \$.70, before 1947 \$1.00. William Stewart, 1516 South Hollywood St., Philadelphia, Pa.

"WINEMAKING," \$1.00. "Stout, Beer, Ale Brewing," \$1.00. Illustrated. Eaton Books, Box 1242-VS, Santa Rosa, California.

FLYING Saucers latest reports, articles. Subscribe for "The Saucerian," 6 Issues \$2.00. Saucers, Dept. 1, Box 2226, Clarksburg, W. Va.

"HYPNOTISM Explained" 64-page book 10¢. Bookmaster, 2432 Fernwood, San Jose 15, Calif.

THE Law of life revealed and how to apply it. \$1.00. The Open Way, Celina, Tennessee.

CHEMICAL And Physical Properties of the Elements. 40-pp. booklet. Alphabetical tabulation. \$1. Columbia Associates, Box 591, Hudson, N. Y.

FOR SALE

LABORATORY Instruments, surplus electronics Engineering, Farhills, Box 26X, Dayton 19, Ohio.

BUY Surplus Jeeps, tractors, winches, pumps, tools, hydraulics, electronics, boats, typewriters, generators wholesale direct from government. List and procedure \$1.00. Aviation Surplus, Box 8-ZD, Thomasville, Penna.

FLYING Saucers chart. Comprehensive visualization of entire UFO story. 22" x 34", color, 158 drawings, 1300 listings. \$1.00. Keziah 916-Z S.21 Arlington, Va.

PRINTING Presses, type, supplies, lists 4¢. Turnbaugh Service, Mechanicsburg, Pa.

100 PERSONALIZED Correspondence postcards. \$1.00 J. T. Buxton, S. A. E. Grosville, Ohio.

PICK Your winners by method of rediscovered ancient Egyptian Planetary Law. My method eliminates chance. Full Instructions and chart price \$3. Timely Turf, 351 Vine Street, San Jose, California.

ENGINES, OHV VB's. All popular makes, 1956, 1959. Ledbetter Enterprises, 1015 West 17th, Texarkana 22, Texas.

\$50 TRANSISTOR Radio \$23.95, Soldering gun \$9.95, C.O.D., Electronic hypnotizer \$19.95. Transworld Export, Box 929, Indio, California.

BUSINESS OPPORTUNITIES

AMERICAN Overseas jobs. High pay. Men, women. Transportation paid. Free information. Write: Transworld Information Service, Dept. MZ, 200 West 34th St., New York 1.

DETECTIVES—Experience unnecessary. Detective Particulars. Wagoner, 125-Z West 66th, N. Y.

ANNOUNCING Home study course in commercial baking. Practical basic training. Good field for those with aptitude. Free booklet, "Opportunities in the Baking Industry." National Baking School, 835 Diversey Pkwy, Dept. 2532, Chicago 14.

INVESTIGATE Accidents—Earn \$750 to \$1,000 month. Thousands of insurance companies, airlines, steamship lines need Claim Investigators. Or make excellent spare time income. We train you at home. Free book. No obligation. Write: Universal Schools, AF3, Box 8202, Dallas 5, Texas.

EARN Extra money selling advertising book matches. Free samples furnished. Matchcorp, Dept. MD39, Chicago 32, Ill.

EARN Extra cash! Prepare advertising postals. Langdons, Box 41107Z, Los Angeles 41, California.

GUARANTEED Homework! Cash commissions! Free outfit! Hirsch, 1301-52 Hoe, New York City 59.

YOUR Own home-operated business! Take over your area as our Service Distributor keeping stores supplied. Nationally advertised 28-year-old line pays you 66 2/3% mark-up. Less than \$100 for merchandise, starts you. For samples, highly successful plan, write Novo, Inc., 1168-P Milwaukee, Chicago 22, Ill.

OPPORTUNITIES! Government land available. U.S. Alaska, Canada. Sledge Surveys, Macon 7, Mississippi.

MAKE \$25-\$50 week, clipping newspaper items for publishers. Some clippings worth \$5.00 each. Particulars free. National, 81-DG, Knickerbocker Station, New York.

\$30-\$60 WEEKLY addressing envelopes at home. Instructions \$1 (refundable). Raiss, 210 Fifth Ave., Suite 1102-M, New York 10

WRITE For profit. No training. Receive many small checks now. Write Publicity, Box 7272S, Kalamazoo, Michigan.

BINOCULARS & TELESCOPES

OPTICAL Bargains—request free giant catalog "CJ." 96 pages—Astronomical telescopes, microscopes, lenses, binoculars, kits, parts. Amazing war surplus bargains. Edmund Scientific Co., Barrington, New Jersey.

BINOCULAR Specialists, all makes repaired. Authorized Bausch Lomb, Zeiss, Hensoldt, Bushnell dealer. Tele-Optics, 5514 Lawrence, Chicago 30, Illinois.

EDUCATIONAL OPPORTUNITIES

FREE Booklet explains sensational courses. Amazing popular piano, modern songwriting, personality courses. Weidner System. 423 E. 7th Street, Boston 27, Mass.

PHOTOGRAPHY For pleasure or profit. Learn at home. Practical basic training. Long established school. Free booklet. American School of Photography, 835 Diversey Parkway, Dept. 2254, Chicago 14, Illinois.

LEARN Sign painting. Big Profits. Signist, 410 So. Western, Springfield, Ohio.

COMPLETE Your high school at home in spare time with 62-year-old school. Texts furnished. No classes. Diploma. Information booklet free. American School, Dept. X336, Drexel at 53th, Chicago 37, Illinois.

USE Your mind! Unique method. Lesson 1 \$1. Dattiles Dime. Eva and Charley Stites, P. O. Box 164, Wheat Ridge, Colorado.

ROCKETS & MISSILES

ROCKET plans and catalog of fuels, tubes, cones, etc. 25¢ (refundable). Central Rocket Company, 87, Wausau, Wisconsin.

STAMPS & COINS

100 LARGE U.S. commemoratives—only 25¢ with approvals—Wm. Rice, 87 Washington Avenue, Kingston 45, N. Y.

1000 DIFFERENT Worldwide stamps \$1.25. Valued over \$20.00. Universal, Box 6, Kenosha 18, Wisconsin.

U.S. STAMPS. Giant bargain catalog—15¢. Raymond, 35-VZD Maiden Lane, N. Y. C. 38.

UNITED Nations. Five different 10¢. Approvals. Anderson, 1112 Harrison, San Francisco 3, Calif.

77 DIFFERENT U.S., 100 different China, 25 different Czechoslovakia, all 60¢ Approvals. Leonards, 1143U North Keeler, Chicago 51.

508 DIFFERENT Worldwide from Madagascar, Macao, Guinea, etc., cataloging over \$15.00 on 35¢. Approvals. Littleton Stamp Company, Littleton Q17, New Hampshire.

COIN Magazine. 200 pages. Sample 40¢. Scrapbook, 732B Milwaukee, Chicago 48.

NEW! 1959 bargain American coin catalogue! Revised prices! Only 25¢. Write: Sullivan, 128-EB East Fourth St., St. Paul 1, Minnesota.

PHOTOGRAPHY PRODUCTS

FREE! Blackhawk's big sale catalog 8mm., 16mm. movies, 2" x 2" color slides. Biggest selection anywhere! Projectors, cameras, supplies—big discounts! Get free, every month, 24-page newspaper-size bargain list! Blackhawk Films, Davenport 26, Iowa.

ABSOLUTELY Highest quality professional double-weight enlargements at dealers prices. 5 x 7, 32¢; 8 x 10, 39¢; 11 x 14, 85¢. No extra charge for cropping or dodging. New Negative from your photo 60¢; minimum order \$1.00. 25% discount on Kodacolor processing. 20% discount on Developing By Kodak. Foto Portrait Co., 1172-T Ogden Ave., New York City 52.

MESTON'S The preferred 35mm color slides. Top quality, biggest library, best package. Exciting Preview Package four slides hermetically sealed in plastic plus 80-page catalog only \$1.00. Meston's Travels, Dept. AS, 3801 N. Piedras, El Paso, Texas.

5,000 8mm.-16mm. Films, equipment. Free catalogs. International, Greenvale, New York.

FREE—Once photographers register now. No obligation. For application write Accredited Press, Inc., 6, New York.

PEN PALS

FIGHTER Pilot making world trip desires to meet fans. 1/Lt. Roy Moses, 25th FIS, APO 235, S. F. C.

LOOKING For pen pals who share your interests in science fiction? This would be a perfect spot for you to place a classified ad. Only 25¢ per word including name and address. Send orders and remittance to AMAZING, One Park Avenue, New York City 16, N. Y. Attention Martin Lincoln.

MISCELLANEOUS

LEARN While asleep with amazing new Electronics Educator endless tape recorder. Details free. Research Association, Box 24-S, Olympia, Wash.

ANALYSIS at home. Recorded techniques so organized they can be played hundreds of hours with perfect continuity. 33 1/3 LP. Free details or send \$10. Freedom Records, Box 3065, Hollywood 28, California.

ELECTRIC Pencil: Engraves all metals, \$2.00. Beyer Mfg., 10511-AD Springfield, Chicago 43.

SKYSCRAPER—Heel shoes, wasp-waisted corsets! Photo catalogs, \$2.00. Finecraft, Box 442-P, Hollywood 28, California.

BARBELLS, Courses, Apparatus. Catalogue 10¢. Good Barbell Co., Dept. D., Siloam Springs, Arkansas.

get more enjoyment out of your HI-FI for only \$1.00!

photo courtesy Electro-Voice, Inc.



Now—just \$1 can show you how to get more listening pleasure from your hi-fi set! That's the cost of the new 1959 edition of the **HI-FI GUIDE & YEARBOOK**—the authoritative Ziff-Davis Annual that covers every facet of high fidelity enjoyment. Besides telling you how to use your equipment for the best possible reproduction, the 1959 **HI-FI GUIDE & YEARBOOK** presents a round-up of the trends in the hi-fi field...tells you how to save on repairs...guides you in the selection of records...gives you tips on tapes. It's actually like getting two big books for the price of one!

GUIDE—Section 1: **IMPROVING YOUR HI-FI**—Strange Allergies of hi-fi. Square Waves Check Tone Controls. Give Your Pickup a Chance. Getting the Most from Your Tweeters. MX means Multiplex. Your Stereo Listening Area.

Section 2: **INSTALLING YOUR HI-FI SYSTEM**—Hi-ing the Fi to the Suburbs. Index Your Music. Ceiling Mounted Speaker.

Section 3: **TAPE RECORDING**—Getting the Most From Your Tape Records. Tips and Techniques. Don't Let Your Tapes Hiss at You. Make Your Own Stereo Tape Recordings.

YEARBOOK SECTION—TRENDS IN HI-FI: developments in 1958 and what the future holds.

CRITICS' CHOICE OF RECORDINGS: a conductor, a music critic, and a sound engineer tell what records (classical and jazz) they would select—and why.

THE ULTIMATE IN FM STATIONS: here's how an FM station in Chicago really caters to its hi-fi listeners—in what could be a nationwide trend in programming! Also gives you a listing of FM stations throughout the country.



STEREO: the latest report on what is happening in this big, exciting field. **PLUS** a photo story showing what can be done to fit more equipment into less space.

All told, the **HI-FI GUIDE & YEARBOOK** brings you a wealth of information to help you get the most out of your hi-fi listening hours. Only \$1.00 (\$1.25 outside U.S.A.), it's a fabulous buy! The **HI-FI GUIDE & YEARBOOK** is on sale March 24—be sure to pick up a copy at your newsstand!

ZIFF-DAVIS PUBLISHING COMPANY

434 South Wabash Avenue, Chicago 5, Illinois

*Learn how to build a
satellite listening
station in the*

1959



ELECTRONIC EXPERIMENTER'S HANDBOOK **on sale now**

The 1959 ELECTRONIC EXPERIMENTER'S HANDBOOK features complete instructions on building a satellite listening station so you can actually hear the "voices" of satellites as they relay information to earth!

In addition, the 1959 ELECTRONIC EXPERIMENTER'S HANDBOOK has 49 other projects for building useful, money-saving electronic devices — complete with step-by-step instructions and hundreds of illustrations and diagrams. Be sure to pick up your copy of the 1959 ELECTRONIC EXPERIMENTER'S HANDBOOK — on sale now, only \$1.



ZIFF-DAVIS PUBLISHING COMPANY
434 SOUTH WABASH AVENUE,
CHICAGO 5, ILLINOIS